HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH

AND SOCIAL SECURITY

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HOSPITAL ABSTRACTS

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HOSPITALS IN GENERAL

1223. NIEUWENHUIZEN, C. L. C. van. Krachtlijnen in de ontwikkeling der medische zorgen. **[Trends in the development of medical care.]** *Acta Hospitalia*, Louvain, 1975, vol. 15, no. 1, pp. 3-20; summaries in French and English, pp. 21-23.

Technical advances in hospital medicine are likely to continue with consequent increased costs. This can only be controlled by the efficient use of equipment and the planning of medical facilities must be at regional and even national level. There must also be effective co-operation between boards of management, hospital administrators and medical staff as well as co-operation between hospitals within a region. The administration must make final decisions after specialist interests have submitted their case and independent experts have been consulted where necessary. Multinational planning might even be a solution where highly expensive systems are concerned.

HOSPITALS IN OTHER COUNTRIES

1224. WEBB, R. C. **The hospital programme for Australia.** *National Hospital*, Chippendale, N.S.W., 1975, March/April, vol. 19, no. 2, pp. 17-19.

This paper describes the development of hospitals and nursing homes in Australia and plans for the future. As in most developed countries, patterns of disease have changed from high mortality from infectious diseases in the 19th and early 20th centuries to a current predominance of death through circulatory diseases and through malignant neoplasms. Statistics show that the number of hospital beds provided per 1,000 population is favourable in comparison with the United Kingdom and United States, but is less than in advanced countries such as Sweden. The Hospital and Health Services Commission was established in 1973 to: (i) recommend on the provision of health services by the Department of Health; (ii) ascertain health care needs and make recommendations in a variety of areas; (iii) make grants, with the Minister's approval; (iv) investigate representation on organizations involved in health care; and (v) promote and participate in planning related to health services. The establishment of this Commission has enabled a detailed analysis of general and psychiatric hospitals and nursing homes to be presented here, with information from the Commission's 'Report on Hospitals in Australia'. Relations between the national and various state governments regarding health planning are also discussed.

PLANNING, DESIGN AND CONSTRUCTION

See also Abstract No. 1224.

HOSPITAL DESIGN

See also Abstract No. 1314.

1225. GIACOMETTI, B. von. Der Mensch im Mittelpunkt bei der architektonischen Gestaltung des Krankenhauses. **[Man as the centrepoint of the architectural form of hospitals.]** *Veska*, Aarau, 1975, May, vol. 39, no. 5, pp. 226-229.

The contribution of the architect to hospital construction is concerned on the one hand with the co-ordination of the functions of the diverse groups of people who will occupy the hospital and on the other with providing the 'shell' in which these groups will live and work. The architect as a human being must dominate the architect as a technocrat. The hospital exists primarily for the patient: the environment should activate the patient and should try to consider the healthy human being inside the patient. While there can be operating theatre architecture or X-ray department architecture there should not really be a 'patient room architecture'—patients' rooms, and other areas open to patients, should as far as possible, be designed and equipped to reflect a home environment. The same applies to the visitors' access to patients. The paper discusses a number of plans for patient areas which illustrate the main thesis.

1226. Krankenhausbau auf neuen Wegen. **[New ways in hospital construction.]** *Bauen + Wohnen*, Zürich, 1975, May, vol. 29, no. 5, pp. 186-213.

Fifteen papers and descriptions of new hospitals in Germany, Switzerland, Canada and the United States discuss and illustrate trends in hospital design. Photographs, plans and diagrams are included.

1227. EICHHORN-RAAB, E. Der Krankenhausbau in den letzten 25 Jahren. **[Hospital building in the last 25 years.]** *Krankenhaus*, Stuttgart, 1975, May, vol. 67, no. 5, pp. 188-195.

This survey of developments in hospital building in Western Germany over the past 25 years is illustrated with sketch plans of four hospitals of varying types. Two factors which have had an important effect on hospital design are the increasing technical developments, affecting both administration and medical care, and the use of industrialized building systems. For the future, hospitals will be affected by the tendency towards the integration of in-patient care and other branches of the health service. The paper includes 35 references to the relevant West German literature.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

1228. **Hospital rises above its problems.** *Modern Healthcare*, Chicago, 1975, May, vol. 3, no. 5, pp. 16s-16u.

The latest extension to Southside Hospital, Bay Shore, N.Y. (architects: The Eggers Partnership, New York) is a seven-storey tower constructed with a two-storey 'wrap-around' unit containing laboratories, administrative offices and other support spaces. The new facility was carefully planned so that it would mesh structurally and functionally with the central section and existing wings to the west and east. The tower has the enlarged radiology department on the first floor, surgical facilities, with eight

operating suites, on the second floor, and nursing units on the remaining floors. Each nursing floor has 16 double and two single rooms. Two more storeys can be added to the tower. Three photographs but no plans are included.

1229. KOLLBRUNNER, M. P. and others. Thurgauisches Kantonsspital Frauenfeld. **[Thurgau Cantonal Hospital, Frauenfeld.]** *Veska*, Aarau, 1975, June, vol. 39, no. 6, pp. 262-272.

The main building of the 350-bed Thurgau Cantonal Hospital, Frauenfeld, has a three-floor podium housing treatment, administration and service departments. Above this rise the 11 floors of the ward block with an additional top floor housing the chapel, lecture hall, meeting room and roof terrace. Each ward floor (on a single corridor plan) has two 16-bed group nursing units, each with its own day room and ancillary rooms. A typical unit has one six-bed, one four-bed and three two-bed rooms plus an isolation room. The subground area contains a civil defence hospital. In separate buildings are a nursing school, staff residences and staff houses. There are three bed and three passenger lifts, a pneumatic tube system with 26 stations, and a bed centre. The paper is illustrated with a site plan, plans of the three lower floors and a typical ward floor, and 10 photographs.

1230. POPPLEWELL, N. **Flinders Medical Centre.** *National Hospital*, Chippendale, N.S.W., 1975, March/April, vol. 19, no. 2, pp. 7-9.

The new Flinders Medical Centre, Adelaide, will comprise a new teaching hospital and the Flinders University of South Australia School of Medicine, which were planned concurrently. The scheme was planned in this way to derive maximum advantages from the close association between teaching and research and clinical work in an area of rapid population development. The Centre was designed to integrate fully all the clinical and teaching functions necessary, whilst providing a flexible and compact building which gave a pleasant environment and room for future growth. The Centre was planned in four stages, the first of which was opened in February 1975. This comprises administrative accommodation, some on-site housing, school of nursing and various departments such as the energy plant, central sterile supply department, lecture theatres and library, and biomedical workshops. Stage two, which is the largest phase, provides the major part of the Centre's clinical facilities, with 320 patient beds, eight operating theatres, a department of radiology and consultative clinics for out-patients. Other specialized departments are scheduled for completion in January 1976. By September 1977, an additional 220 beds, clinical investigation departments, an accident and emergency department and also temporary accommodation for some specialized departments will have been completed. Stage four, still being planned, will bring the number of beds to 710 and provide permanent accommodation for departments previously housed temporarily. A diagram shows planned staff structure.

DESIGN OF SPECIAL DEPARTMENTS

1231. Ecole d'infirmières et d'infirmiers-assistants de Morges. **[School for nurses and assistant nurses in Morges.]** *Veska*, Aarau, 1975, Feb., vol. 39, no. 2, pp. 65-68.

This school, which takes 60 students a year, is in the grounds of Morges Zone

Hospital. Accommodation includes lecture room, swimming pool, music room and shelter in the basement, and large lecture room, four rooms for practical training, dining-room, library and offices on the ground floor. The three upper floors contain 60 bedrooms, toilets, bathrooms, a recreation room and a small laundry. The reinforced concrete structure has a facade of prefabricated concrete elements, wood and aluminium. The interior has been designed for comfort, simplicity and durability; it includes synthetic carpeting, washable walls and false ceilings. Furniture consists of standard units which can be arranged in various ways. Plans of the basement, ground floor and one upper floor and two internal photographs are included.

1232. GERSTER, R. Ecole d'infirmières-assistantes en Subriez, Vevey. **[School for assistant nurses in Subriez, Vevey.]** *Veska*, Aarau, 1975, Feb., vol. 39, no. 2, pp. 68-71.

This school of assistant nurses is pleasantly situated among trees and patios. Its facilities include dining-room, kitchen, swimming pool, garage, boiler room, laundry and gymnasium on the lower ground floor, and lecture and training rooms, library and offices on the upper ground floor. The other three storeys house 60 bedrooms, bathrooms, hairdressing salon, sitting rooms, linen rooms and supervisors' and porter's flats. All bedrooms and recreation rooms have unit furniture which can be arranged as desired. Bedroom floors are carpeted, but corridors and lecture rooms have plastic floor coverings. The structure is reinforced concrete and wood. Three plans and three photographs are included.

1233. BLUMENKRANZ, J. and WEBER, R. **From custodial to rehabilitation facility.** *Hospitals*, Chicago, 1975, May 16, vol. 49, no. 10, pp. 66-68.

The new rehabilitation block at the Jewish Hospital and Rehabilitation Center of New Jersey, Jersey City (architects: Joseph Blumenkranz and Associates, New York) has four floors. The entire ground floor is devoted to rehabilitation facilities, including occupational therapy, physiotherapy, a flat for retraining in daily living activities, hydrotherapy, speech training, psychiatric treatment and vocational testing and training. There is also a wide range of diagnostic facilities for both in- and out-patients. The three upper floors house ward units with a total of 152 beds, most of which are in single or double rooms. These are arranged in small groups each of which includes a single room, a double room, a bathroom and an entrance foyer. This gives opportunities for mutual help and the sharing of visits from friends, relatives and voluntary workers. Each patients' room has a wide door onto a balcony and specially designed toilet and bathing facilities have been adapted for handicapped patients. On the first floor is a six-bed intensive care unit.

DESIGN OF SPECIAL HOSPITALS OR UNITS

1234. **Escalating outpatient care.** *Modern Healthcare*, Chicago, 1975, June, vol. 3, no. 6, pp. 16m-16o.

The new six-storey out-patient department at Ohio State University Hospital, Columbus, has 10 escalators, each wide enough for two adults to ride abreast at 120 feet

per minute. The escalators are installed in pairs for two-way service between all floors and were designed to eliminate the waiting and crowding that can occur when lifts only are used. Signs direct handicapped and other persons to the eight computer-controlled lifts that have also been installed. In addition to examination and consulting rooms, the building has its own X-ray units, pharmacy, laboratories and cardiology and out-patient surgery facilities. Individual clinics are colour-coded to aid identification. Other features include: room status light system, automatic call distribution system, 10 nursing stations, partially computerized multiphasic health testing system and an appointment reminder system.

1235. **VA's first new nursing home practical, attractive.** *Hospitals*, Chicago, 1975, May 16, vol. 49, no. 10, pp. 23, 28.

When the Veterans Administration was planning its first nursing home to be built at Bay Pines, Fla., seven of its architects each prepared two sketch plans and the best points from the 14 plans were incorporated in the final design. This was of single-storey construction with two 60-bed ward units designed to make the maximum distance from the nurses' station to the beds less than 100 feet. Adjoining double patients' rooms can be converted to a four-bed room by moveable partitions. There are toilets adjacent to each patients' room. About half of the patients would be in wheelchairs and 75 per cent would need assistance with daily living activities. A pleasant home-like atmosphere is provided and a patio, terrace and other outdoor areas are easily accessible.

1236. FLESHIN, F. **Designing an obstetrics department.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 75-76, 78-79.

Advances in medical knowledge and technology in the management of maternity services have led to new considerations in planning maternity departments. Standards are suggested but they may vary according to the hospital to which the department belongs. The new department at the Presbyterian Hospital of Dallas is used as an example. The location and size of the delivery suite is considered together with the services and care which are expected to be carried out and the equipment and services which need to be provided for the needs of the patients and the staff.

1237. JAHAN, A. La clinique du centre national d'ophtalmologie des Quinze-Vingts. **[Quinze-Vingts National Ophthalmology Centre.]** *Techniques Hospitalières*, Paris, 1975, Feb., vol. 31, no. 353, pp. 37-42.

The first part of this paper outlines the history of the centre, which is the oldest in the world devoted to ophthalmology. The second part describes its new building which provides 300 beds, out-patient and emergency departments and full supporting services. It has one 28-bed unit for children and four units for adults each with 68 beds in rooms with one, two or four beds. All beds are adjustable and have movable bedside tables fixed to rails on the wall and three types of lighting. Each two-bed room has a toilet and wash-hand-basin and four-bed rooms have two toilets. Overnight accommodation for relatives is available. The reinforced concrete structure has a facade of stone, glass and wood. All rooms have sun blinds, ceiling heating and good ventilation. Floors are covered with white thermoplastic and decorations are in light colours. Five photographs, but no plans, are included.

1238. McGLINCHEY, M. A. and MITALA, R. F. **Using environmental design to teach ward layout to severely and profoundly retarded blind persons: a proposal.** *New Outlook for the Blind*, New York, 1975, April, vol. 69, no. 4, pp. 168-171.

This paper describes a current study by two behaviour modification specialists designed to teach ward layout to the 30 severely mentally handicapped and blind male patients in an American state institution. The patients varied from being totally dependent on staff to needing only minimal supervision. The study has shown that the patients' blindness is a greater handicap than their retardation, and so orientation within the ward became a primary goal for patients. A tactile system providing environmental cues to a patient's location at any time was then designed. Initial efforts concentrated on the self-care areas of toilet-training, showering, etc., and the first aid developed was a system for reaching the bathrooms in a route from the day-room. The route was marked on the wall by a carpet strip at waist level, which the patients were encouraged to touch each time they were taken to the bathroom. Patients have gradually learnt to feel their way along this route from the day-room. A similar route using wooden tiles has enabled patients to move from the day-room to the bedrooms or outside. Contrasting flooring is also planned, such as at the entrance to a new room, to help guide patients. It is hoped these experiments will make patients more active both in terms of independent movement and social interaction. The layout of the ward is illustrated.

WARDS AND PATIENTS' ROOMS

See also Abstract No. 1225

1239. KNOBLAUCH, H. Kranken-"Zimmer" oder Kranken-"Raum". **[Patients' rooms or patients' space.]** *Krankenhaus*, Stuttgart, 1975, June, vol. 67, no. 6, pp. 218-225.

It has in the past been assumed that the advantages of single patient's rooms are heavily outweighed by the disadvantages of higher costs and increased requirements. This assumption has been based on the single room being designed with four fixed walls and a width of 3.3 m. and a depth of 5.2 m., with the rooms arranged on conventional single or double corridor plans. Using a basic design of room 2.8 m. wide, 3.6 m. deep, and with a flexible corridor wall, which can be open to varying widths or fully closed, the author has developed a variety of schemes. A 12-bed nursing unit with single rooms of this design (each with its own wash-basin and toilet) arranged in the form of an L would occupy 142 sq.m. while a conventional unit of four three-bed rooms occupies 149 sq.m. A number of sketch plans showing arrangements of four nursing units each with 10 single rooms on different geometric patterns, and one showing 80 beds on a single floor in a cruciform design, are reproduced. These show an average of 26.8 sq.m. per bed as compared with 29.5 sq.m. per bed for conventional wards with two- or three-bed rooms. The single room arrangements greatly reduce travelling distances for nursing staff. The conclusion is that the single room is a practicality even from the economic point of view and that it certainly provides a more comfortable environment for the patient.

1240. NOVOTNY, F. Der Pflegebereich im Allgemeinkrankenhaus: Entwicklungen und Tendenzen. **[Nursing units in general hospitals: developments and trends.]** *Krankenhaus*, Stuttgart, 1975, June, vol. 67, no. 6, pp. 231-238.

A study of trends and developments over the past 10 years in the design of ward units, illustrated with 10 sketch plans from German hospitals, comes to the following conclusions: (i) the two-bed room is likely to become standard; (ii) the group nursing system, because of the direct contact between nurse and patient, results in successful patient care; and (iii) the many disadvantages of stacking wards one above the other in multi-storey blocks have resulted in a marked tendency towards low buildings with simpler organization which, even in the case of large hospitals, make for a more human environment.

ENGINEERING SERVICES

See Abstract Nos. 1249, 1314, 1348

ELECTRICAL INSTALLATIONS AND EQUIPMENT

1241. BAKER, C. **Electrical installations in hospital complexes.** *Electrical Review*, London, 1975, June 27, vol. 196, no. 25, pp. 787-790.

The modern hospital is of such size and complexity that practically all normal types of installation, plus a number which are peculiar to hospitals, are involved. In addition services are in use 24 hours a day seven days a week and this means that reliability must be at a very high level. Although services may differ from group to group there is a general pattern which applies throughout a region. This general pattern is described under the following heads: hospital supplies and cabling; conduit and trunking; switchgear and risers; lighting; air-conditioning; and special systems (including nurse call, medical gases, monitoring, automatic control and plant alarm installations).

ARTIFICIAL LIGHTING

1242. **Rx for hospital lighting.** *Lighting Design & Application*, New York, 1975, May, vol. 5, no. 5, pp. 24-29.

Seven industrial design students at Kent State University were asked to produce a like number of possible solutions to the problems involved in providing a system to meet all the lighting needs of a patient's room. This paper outlines how each of the students approached and developed individual solutions to the problem.

COMMUNICATION SYSTEMS

See also Abstract No. 1258

1243. HAVEN, C. O. **Communications system serves multihospital center.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 52-54.

One of the services the Detroit Medical Centre provides to its five constituent hospitals (2,000 beds) is a communications system. This comprises a computerized switchboard, register of doctors, call system and a patient telephone service. The system has improved the efficiency of medical staff, improved the patient telephone service, reduced the number of operators and reduced the cost.

LIFTS AND ESCALATORS

See Abstract No. 1234

MAINTENANCE OF BUILDINGS AND EQUIPMENT

1244. ALSTON, G. K. **Medical-engineering maintenance—the way ahead.** *Hospital Engineering*, Stevenage, 1975, June, vol. 29, pp. 8-11, 13-17.

It is estimated that the value of medical engineering equipment in England, Wales and Scotland is at present £150 million and that 2,040 maintenance staff are needed to look after it. At present there are probably only 700 employed in this work leaving some 1,300 to be recruited and trained. Over the next 10 years perhaps double that number will be needed for the expanding quantity of equipment likely to come into use. The paper makes proposals for the recruitment and training of medical engineering maintenance officers.

1245. WEAR, J. O., WILKINSON, J. M. and RAIBLE, R. W. **Elements of an instrumentation repair shop.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 55-57.

Standards are suggested for planning a two- or three-man biomedical instrument maintenance repair shop for a 300 to 500-bed hospital. Staff, test equipment, tools, space, environment, electrical and other services, and spare parts are covered, together with an estimate of the costs involved.

1246. SMITH, A. P. **Computers as a management tool for operation and maintenance engineers.** *Hospital Engineering*, Stevenage, 1975, June, vol. 29, pp. 27-28.

The author suggests that the computer can help the hospital engineer in three main problem areas: determining the cost of maintenance for the current and succeeding year; determining staff needs now and in the future; and calculating when replacements will be required and the sum, which will be required annually for this purpose. Pilot experiments on all these points are under way within the Northern Regional Health Authority.

PIPING INSTALLATIONS

1247. FEELEY, T. W., MCCLELLAND, K. J. and MALHOTRA, I. V. **The hazards of bulk oxygen delivery systems.** *Lancet*, London, 1975, June 28, vol. i, pp. 1416-1418.

Many hospitals obtain oxygen from a supply of bulk liquid oxygen which is delivered throughout the hospital via pipelines. This paper describes an incident in which,

through a series of malfunctions, dangerously high pressure developed in the pipeline. The system described lacked a relief valve to vent excess pressures. In North America such a valve is required on all oxygen delivery systems. An alarm system is also required which detects rises in pipeline pressure. Regulations in the United Kingdom do not provide for pressure-relief valves or alarms to warn of high pipeline pressures. High-pressure accidents are a real threat to patients and staff unless proper safeguards are built into oxygen delivery systems.

EQUIPMENT, FITTINGS, FURNITURE

BEDS, COTS, ETC.

1248. JONES, R. F. and others. **The "Coast" hydrostatic bed.** *Medical Journal of Australia*, Sydney, 1975, March 15, vol. i, no. 11, pp. 333-335.

A water bed known as the 'Coast' hydrostatic bed is described and illustrated. The water sack is laminate of non-toxic polyvinyl chloride 0.016 inches thick welded at the sides and at one end. It is fixed with a four-inch extension hose and fitting for simple filling and removal of air from the sack. The supporting frame is so designed as to form a toe recess to the water bed frame. It measures approximately six feet eight inches long by two feet 11½ inches wide. The actual frame height is 11½ inches. A recess is provided in one side of the supporting frame to allow the use of mobile hydraulic lifting devices. The bed frame can be accommodated in a standard seven-foot hospital bed. The overall height will depend on individual requirements; 24 inches is suitable for paraplegics who are able to transfer independently from a wheelchair. For patients who cannot transfer independently it is advised that the base should not be used but the water bed frame placed on a hospital bed frame. Bases are in two sizes, 12 and 24 inches high. The bed weighs 145 pounds empty and 1,200 pounds when filled with 125 gallons of water. The water can be heated by means of an electric blanket and a thermostat is necessary if a constant temperature is desired in the water bed. The bed is used in the management of acute spinal cord injuries and greatly reduces the nursing of patients with pressure sores.

EQUIPMENT GENERALLY

1249. GREAT BRITAIN. DEPARTMENT OF HEALTH AND SOCIAL SECURITY, WELSH OFFICE and SCOTTISH HOME AND HEALTH DEPARTMENT. **Works department for district general hospitals and teaching hospitals.** (Health Equipment Note No. 34) London, Her Majesty's Stationery Office, 1975, 16pp. £0.48

This Equipment Note gives guidance on the equipment required for a works department carrying out building and engineering maintenance in district general and teaching hospitals and separate large industrial complexes serving an area comprising several groups of hospitals. The note relates to six sizes of departments to serve groups containing 300 to 600, up to 800, 1,200, 2,000, 3,000 and 4,000 beds. The equipment is listed by work area, room or space, for each of which guidance on cost is given.

ELECTRONIC EQUIPMENT

See Abstract Nos. 1345, 1346

STAFF GENERALLY

STAFF COMPLEMENTS

See also Abstract Nos. 1264, 1265

1250. DIXON, P. A. **"NOSC": an attempt to avoid a bureaucratic explosion.** *Hospital and Health Services Review*, London, 1975, July, vol. 71, no. 7, pp. 229-232.

This paper describes a system of staff control used in the Wessex region for the production of management structures consequent upon reorganization of the National Health Service. Non-operational staff control (NOSC) is basically a system of identifying the total gross salary cost to the authority of all staff employed on non-operational functions and from this identification agreeing the limits within which management structures are drawn up, developed and monitored. The gross salary cost of each grade of staff is calculated and simplified by allocating one NOSC point to each £1,000 and only allowing the pointage of each grade to be taken to one decimal point. The stages in the system are outlined. Its advantages and disadvantages are discussed. It has also proved possible to use NOSC for analysis and development of the management structures.

1251. FERDERBER, C. J. **Just what are your manpower needs? Find out with this easy survey.** *Hospital Financial Management*, Chicago, 1975, May, vol. 29, no. 5, pp. 18-25.

This paper demonstrates how data already generated in most hospitals can form the statistical base for staffing surveys. The actual form of such surveys will be determined by factors such as the physical layout of the hospital, the general work load expected and the characteristics of the hospital's work force. Staffing surveys can be used effectively to: (i) develop sound personnel budgets; (ii) provide evidence of a need for additional or fewer staff; and (iii) develop sound staffing guides both current and future. The paper then presents in detail survey methods used in the three main stages: (i) pre-action survey phase; (ii) on-site action phase; and (iii) implementation phase. Examples of survey forms used are illustrated. Using a minimum of two years' survey data, the development of a staffing guide has also been found useful.

1252. RAMGE, C. Stellen- und Dienstpostenpläne. **[Staff planning.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1975, May, vol. 16, no. 5, pp. 283-286, 291-294, 297-304.

The author presents a general survey of methods for calculating staff complements in the hospital and discusses the various types of duty, the working out of rotas, and the avoidance of over- or understaffing.

RECRUITMENT

See Abstract No. 1266

STAFF MANAGEMENT

See Abstract Nos. 1267, 1268

STAFF RELATIONS

1253. FATCHETT, D. and GUEST, D. **Worker participation: some implications for the N.H.S.** *Health Services Manpower Review*, Keele, 1975, May, vol. 1, no. 2, pp. 13-17.

The authors discuss the background of worker participation (defined as 'those processes whereby subordinates are able to display an upward exertion of control'), its development in industry, and its possibilities within the National Health Service. They suggest that there may be scope for an extension of direct participation in the medical and administrative subsystems. Although there are some formidable constraints the build-up of pressures and militant action may result in a greater readiness to look at possible innovations. It is necessary to manage with the consent of the managed by extending participation at various levels: the alternative is the possibility of protracted and often damaging conflict.

1254. PACKER, C. L. **Preparing hospital management for labor contract negotiations.** Chicago, American Hospital Association, 1975, viii, 26pp. $6.00.

The purpose of this booklet is to show hospital administrators what and how economic and non-economic information can be used and organized for use by management during collective bargaining. The booklet has chapters on: external forces acting on collective bargaining; preparation for negotiation; organization of the negotiation book; and preparation of financial data.

1255. POINTER, D. D. and METZGER, N. **The National Labor Relations Act: a guidebook for health care facility administrators.** New York, Spectrum, 1975, [xvi], 272pp.

When amendments to the National Labour Relations Act were enacted on 26 July 1974, all non-governmental health care facilities in the United States became uniformly subject to federal labour law for the first time. This book aims to make administrators generally familiar with the function and structure of the Act as amended and to discuss its impact on the health services. It covers: development of the law; the 1974 amendments; collective bargaining and bargaining units; unfair labour practices; labour/management disputes; union security arrangements; labour/management reporting and disclosure; administration of the Act; and labour relations.

1256. PETHYBRIDGE, F. **'What is wrong with Whitleyism'.** *Health Services Manpower Review*, Keele, 1975, May, vol. 1, no. 2, pp. 3-7.

The author, who is a regional health authority administrator, puts forward some suggestions for improving the management sides of the National Health Service

Whitley Councils which control staff relations. First, management sides should have a more positive approach and not play, as they have often done, a passive or even defensive role. Secondly, members and officers of Whitley Councils should have a very real interest in this aspect of management. Thirdly, the secretariat should be provided by a body outside and independent of the civil service: its members should not be officers of the Department of Health and Social Security as at present. In addition it is essential that management sides are fully briefed on local views and that local managers should be more involved in this process.

STAFF TRAINING

See also Abstract Nos. 1231, 1232, 1269, 1276, 1297, 1300, 1311, 1312, 1325, 1339

1257. SMITH, G. **A process orientated leadership workshop.** *Industrial Training International*, Oxford, 1975, June, vol. 10, no. 6, pp. 183-185.

The authors describe the 'leadership workshop' which forms part of the six- to eight-week management development course of middle and senior managers in the National Health Service held at the Nuffield Centre for Health Service Studies, Leeds. It lasts three days and is based on the idea that if participants are able to understand and analyse situations they find themselves in and the effect such situations have on them, and can choose how to behave in them, they will be better able to cope in the future. The 'workshop' uses a number of games and exercises in which participants are encouraged to experiment with their behaviour and later discover the impact they have had on their colleagues. During the workshop the tutors explore various theories of leadership and management style.

1258. MARQUIS, J. A. **Two-way closed-circuit television offers educational programs.** *Hospitals*, Chicago, 1975, May 16, vol. 49, no. 10, pp. 85-86, 88-89.

In 1965 a start was made with a two-way inter-state closed-circuit television system linking medical schools at Dartmouth College, N.H., and the University of Vermont and by 1972 the system (known as INTERACT) was in full operation with seven other hospitals and institutions taking part. INTERACT provides a communications bridge between the resources of medical centres and community health services. Examples of the uses made of the system are: radiological consultations between Vermont University and a hospital 45 miles away; speech therapy and dermatology clinics conducted via the network; shared conference speeches, consultations, and adult educational courses; and a series of doctor-nurse medical seminars with an average of 165 nurses from various centres taking part each week. Since 1972 INTERACT has been used for an average of 60 hours a week. With the two-way system listeners talk back and can interrupt at any time.

STAFF WELFARE

See Abstract No. 1308

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

See Abstract No. 1272

MEDICAL STAFF

See Abstract Nos. 1323, 1339, 1349, 1351, 1366

NURSING STAFF

See also Abstract Nos. 1231, 1232, 1359, 1366

1259. DICKOFF, J., JAMES, P. and SEMRADEK, J. **8-4 research.** *Nursing Research*, New York, 1975, March/April, vol. 24, no. 2, pp. 84-88; May/June, vol. 24, no. 3, pp. 164-176.

This paper presents a proposal for nursing research which integrates practical, technical and political judgment. It is called 8-4 research and is contrasted with pseudotechnical research. It is discussed as an advance over more current nursing research. In the first part it is proposed that nursing research should be considered in terms of results not merely promise for nursing, that 8-4 research is a suitable paradigm for all nursing research, and that nursing research is a suitable preoccupation for any and all nursing staff. The second part gives eight approaches to 8-4 research, which are also encounters with or assaults on current nursing research attitudes.

1260. GORTNER, S. R. **Research for a practice profession.** *Nursing Research*, New York, 1975, May/June, vol. 24, no. 3, pp. 193-197.

Research for any practice profession necessarily deals with professional arts and skills, with the base of knowledge underlying the practice field, and with the initial and continuing education of the professional. Recent developments and activities in these areas are discussed, including the growth in the investigator pool and studies that deal with the process and outcomes of nursing care.

1261. SCHLOTFELDT, R. M. **Research in nursing and research training for nurses: retrospect and prospect.** *Nursing Research*, New York, 1975, May/June, vol. 24, no. 3, pp. 177-183.

The purpose of this paper is to inquire into where nursing was, is and hopes to be with regard to its stake in research and scholarly work, to identify some issues relevant to that general problem, and to propose some future directions for nursing and nursing education.

1262. TAYLOR, S. D. **Bibliography on nursing research, 1950-1974.** *Nursing Research*, New York, 1975, May/June, vol. 24, no. 3, pp. 207-225.

This bibliography contains 1,004 items in English and is divided into 22 broad categories. It includes papers, editorials, letters to editors, books, monographs, conference proceedings and doctoral dissertations.

1263. CHOKRIEH, A. C. **Change in nursing in Nigeria.** *International Nursing Review*, Lausanne, 1975, May/June, vol. 22, no. 3, pp. 71-79.

On-going professional growth implies change, and this is shown to be necessary both in nursing practice and education. In order to be effective, change should be planned to take into account the current situation in nursing in a particular field or area. In Nigeria, as in most African countries, there is rapid social, cultural and technological change which greatly influences progress in nursing and other professions. In-service education is a field in which development is needed in Nigeria, and such training needs to be carefully planned to form a co-ordinated pattern involving all nursing staff and drawing on the valuable experience of those who are particularly acquainted with local needs. The author tabulates and illustrates diagrammatically methods of planning change and directing it towards particular goals. This involves creating conditions under which change can occur, although this will necessarily be a gradual process.

1264. GERMAINE, A. **Staffing patterns and mobility of nursing personnel.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, May, vol. 17, no. 5, pp. 46, 48, 50.

Directors of nursing services are sometimes criticized for not being sufficiently cost conscious, yet the staff of finance departments do not appreciate that staffing must vary according to the patient's diagnosis and the nurse's skill—it cannot be settled by a simple mathematical formula. Progressive organizational charts show new positions in nursing such as the nurse clinician and the staffing co-ordinator. The employment of the latter can be justified because she can spend time on the use and placement of staff which the director cannot do. Staffing is dependent on the effectiveness of the director of nursing in the overall organization of the hospital and within her department. She needs to have the authority to make changes in the interests of efficiency. Staffing and mobility of nurses depend on how nurses are used—they should be relieved of non-nursing duties. The new trend of transferring duties from doctors to nurses should not prevent nurses from doing their own job of nursing. If the nursing organization on a chart is different from the real relationships conflict and frustration will ensue. The emergency department represents a special problem because of the peaks and valleys of activity. Rearrangement of physical facilities to separate out-patients, in-patients, clinics, etc., from real emergency cases could improve use of the skills of the staff in emergency departments. Other areas of concern are intensive care units, where the employment of non-professional staff can make the work load of registered nurses heavier, and the general increase in hospital services.

1265. MINETTI, R. and HUTCHINSON, J. **System achieves optimal staffing.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 61-62, 64.

This paper describes techniques for adjusting nursing staff levels to accommodate varying work load that have been developed by management engineers of the Blue Cross of Western Pennsylvania. Patients are classified into one of four grades according to the amount of nursing they require; this grading is changed as their needs change. The supervisory nurse can convert the sum of these measurements into a statistical 'effective census'. This is reviewed at each shift change so that nursing staff can be redistributed. Reports are fed into a computer for analysis to indicate the estimated and actual use of staff and the effectiveness of the system.

1266. SLOAN, F. A. and RICHUPAN, S. **Short-run supply responses of professional nurses: a microanalysis.** *Journal of Human Resources*, Madison, Wis., 1975, vol. 10, no. 2, pp. 241-257.

Recent estimates reveal that 67.5 per cent of registered nurses in the United States are active. Of those employed in 1970, only 43 per cent worked 50 to 52 weeks, and 14 per cent worked less than 30 hours during the week before the 1970 census. With this amount of slack in the stock of nurses, it is important to ascertain sources of variation in the time nurses devote to professional activity. This study investigates determinants of the nurse hours of work per week and nurse annual hours of work at the level of the nurse's household. The results indicate that the hours a nurse works are responsive to the nurse's hourly wage and the wage of her husband. The results are compared with those of other studies and the policy implications are discussed, particularly the relative merits of increasing the supply of registered nurses by raising wages versus an educational policy aimed at increasing their number.

1267. SAINT-GERMAIN, J. Le salaire, facteur primordial de satisfaction au travail. **[Salary, prime factor in job satisfaction.]** *Infirmière Canadienne*, Ottawa, 1975, Feb., vol. 17, no. 2, pp. 13-17.

The 684 replies to a questionnaire by nurses in Quebec show that for nurses earning up to $12,000 a year, salary is the most important factor in job satisfaction. Above this figure, other factors are more important. At present nurses stand only on the threshold of satisfaction because human needs are not satisfied. Analysis of the replies shows that: (i) nurses in Quebec are satisfied with communication with colleagues, job security, degree of responsibility and salary; (ii) they are less satisfied with the inducements of work, use of their abilities, variety, promotion, technical supervision, authority and gratitude; and (iii) they are least satisfied with communication with their superiors, working conditions, supervision, innovations, organizational policy and assignment of staff. These findings indicate that administration should pay more attention to the human factors in nurses' work, try to understand their problems and create a climate in which nurses can satisfy their needs for esteem and self-realization.

1268. CLARK, J. **Time out? A study of absenteeism among nurses.** London, Royal College of Nursing, 1975, 68pp. £1.35.

This study of short-term absences was undertaken in a large teaching hospital group with an estimated total nursing staff of 1,707 at the time of the study. It falls into two main sections; (i) an analysis of one month's absence figures for the whole group; and (ii) the concept of 'absence proneness' and the identification of several potential predictors of absence behaviour.

1269. WALKER-SMITH, A. **Night school for nurses.** *Nursing Times*, London, July 3, vol. 71, no. 27, pp. 1065-1067.

Family commitments prevent many nurses from attending 'back to nursing' courses. United Liverpool Hospitals group has overcome this problem by holding evening classes. The first one-year course consisted of one evening a week for three terms of 13, 15 and 10 weeks. The response was so great that two separate classes had to be run to cope with the 115 students who enrolled in the first year. This created a number

of problems and in the second year the course was restricted to 44 students and consisted of three terms of 15, 10 and eight weeks. An attempt was made to place the emphasis on practical work in spite of the difficulties involved. The value of the scheme is discussed briefly. Outlines of the first and second courses are given.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See Abstract No. 1325

ANCILLARY STAFF

See Abstract Nos. 1297, 1311, 1312

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 1250, 1326

1270. ABERNATHY, W. J., SHELDON, A. and PRAHALAD, C. K. **The management of health care.** Cambridge, Mass., Ballinger, 1974, xviii, 315pp. £7.20

The essential purpose of this book is to draw attention to the problems of managing the creation and use of technology in health care, whether that means a new blood pressure machine or a new way of doing something, whether directly involved in the medical treatment process, e.g. the nurse practitioner, or in the management of that process, e.g. a management information system. The 21 chapters are arranged in four parts: an overview; management of research and research organizations; introducing the new technology; and the impact and consequences of technology for the organization.

1271. BOESE, J. Matrix-Organisation im Krankenhaus. **[Matrix organization in hospitals.]** *Krankenhaus*, Stuttgart, 1975, June, vol. 67, no. 6, pp. 209-214.

The organizational scheme put forward in this paper is intended primarily for large hospitals with responsibilities for teaching and research as well as patient care. Hospital departments are divided into two groups: functional activities (e.g., specialist clinical departments and infrastructure departments such as diagnosis, research, rehabilitation); and general service activities (e.g., administration, supplies, technical services). Within each group related departments combine to form 'centres' (for example, the centre for therapy and rehabilitation includes the anaesthesiology, operating, maternity, physiotherapy, occupational therapy and radiotherapy departments). Each centre has a hierarchial system within itself but there is also lateral co-ordination between the functional and general service centres. Under the general board of management are the officers concerned with research, patient care and teaching. There are also co-ordinating committees, whose members represent the individual departments, to liaise between the medical centres and the general service centres. In the case of new buildings, this interlocking of the vertical and horizontal systems can be enhanced by suitable design. General services could be centralized, for example, as well as the interdisciplinary departments in the clinical area (e.g., intensive care, laboratories).

1272. BOTTLER, J. Controlling—eine Funktion auch im Krankenhaus. **[Control —also a hospital function.]** *Krankenhaus*, Stuttgart, 1975, May, vol. 67, no. 5, pp. 195-203.

Since the management of hospitals is normally in the hands of a body of experts in their own particular fields there is a risk that the interests of one or another may be given undue priority. To counteract this it is suggested that the concept of the 'controller', which originated among business firms in the United States, should be adapted for hospitals. At first the responsibilities of this co-ordinating officer were largely concerned with finance but later a number of other duties were added. What is suggested in this paper is that the hospital 'controller' should oversee planning, finance, data processing, the monitoring of efficiency, and the dissemination of information. The special requirements in the hospital field under these headings are discussed in detail. The controller should not be responsible to any other chief officer, such as the administrator, but should be a member of the management in his own right.

1273. BOUCKAERT, J. Drie tendensen in het moderne ziekenhuis: over bureaukratisering, professionalisering en humanisering. **[Three trends in modern hospitals: bureaucracy, professionalism and humanization.]** *Acta Hospitalia*, Louvain, 1975, vol. 15, no. 1, pp. 24-39; summaries in French and English 39-40.

This paper presents a review of the literature (with 23 references) on bureaucracy, professionalism and humanization both in general terms and as applied particularly to hospitals. While hospital administration may require an organization based on the principles of bureaucracy this is not necessarily compatible with professionalism: the latter is based on self-determination and autnomous decision-making supported by expert knowledge and professional ethics. The increasing demands for staff participation on the one hand and a patient-centred organization on the other may not be compatible with bureaucracy and professionalism: this represents a challenge to hospital management.

1274. KIRK, C. and BENNETT, A. E. **Management and advice at the grass roots.** *Lancet*, London, 1975, May 24, vol. i, pp. 1180-1182.

The reorganization of the management structure of the National Health Service has resulted in a gap between multidisciplinary management at the district level (which is the lowest level in the overall management hierarchy of national, regional and district levels) and the multidisciplinary clinical teams which care for patients. Such teams normally comprise professionals who provide their own management from within the team. The only link between these teams and the management at district level is provided by single profession hierarchies. This is unsatisfactory since each hierarchy can only make significant contributions, both to managing multidisciplinary teams and to representing professional interests at the district management level, within its own professional sphere; middle management is thus fragmented. The experimental development of community hospitals by the Oxford Regional Health Authority has included the provision of: (i) a small local multidisciplinary management team, responsible for day-to-day management of the community hospital and other primary health services; and (ii) a multiprofessional advisory committee to advise the district management team on the operation of local services and to advise the local management team, but without taking either financial or managerial responsibility.

These arrangements have worked well to provide clinical teams with co-ordinated advice from various professional spheres and the district management with a clearer understanding of problems encountered in local services.

1275. CRAWFORD, L. E. **Hospital 'de-ministration': experiences in six teaching hospitals.** *Medical Journal of Australia*, Sydney, 1975, March 15, vol. i, no. 11, pp. 348-353.

'De-ministration' describes a change in administrative emphasis, the bureacratic method of controlling activities through imposed discipline being largely replaced by self-discipline. An experimental management programme at Sydney Hospital has already been described (see *Hospital Abstracts*, Vol. 12, Abstract 966). This paper describes similar projects at five other large teaching hospitals, four in Australia and one in New Zealand. The background of the scheme is outlined and the methodology described. Results are set out under three headings: operating results; personal observations; and statistical results. When professional staff are encouraged to participate in management they do so very effectively. The most significant change reported was improved communication. Staff members who formerly had a rather narrow departmental outlook now identify with the hospital as a whole and even beyond, to the community. Other benefits of the scheme have included better patient care, more patients treated, lower cost per patient, improved morale and flexibility in outlook.

1276. SMITH, D. **Implementing a management development program: here's how Hamilton Civic Hospitals did it.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, June, vol. 17, no. 6, pp. 48, 50-51, 53.

Early in 1973 the senior administrative staff of Hamilton (Ont.) Civil Hospitals decided to initiate a management development programme. The personnel department assumed responsibility for the programme, but a consultant was appointed to act as overall programme consultant, to organize and lead a pilot programme for the purpose of need identification and to provide pre-test and post-test evaluation instruments. Criteria for the selection of participants were decided and the needs of those selected were sought by means of a questionnaire, interviews and a pilot study. As a result, a broadly-based, comprehensive programme using a multi-phase approach was devised. Details are given of the first and second phases which emphasize individual training and growth, but also develop certain tools essential to the success of the third phase (now being planned), where the focus shifts from the individual to organization, development and change. The ultimate impact of the programme cannot be assessed until completion of the third phase, but some of the positive results already achieved are outlined.

ECONOMICS OF HOSPITAL MANAGEMENT

See also Abstract Nos. 1296, 1330, 1338, 1364

1277. BIGGS, E. L. **Allopathic, osteopathic hospitals unite.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 45-47.

In 1969 Lewistown (Pa.) Hospital (allopathic) and the F. W. Black Hospital (osteopathic) were both in need of finance, for expansion and rebuilding respectively;

they served the same community of 100,000. It became apparent that a merger would benefit both hospitals and the community by avoiding competition for funds which would then provide duplicated services. The major difficulties of convincing key board members and doctors in both hospitals and also of convincing the community to provide the necessary finance were eventually overcome. Formal agreement in 1970 was followed by the actual merger in 1972 when the new facilities were complete. Staffing plans leading to some redundancies had to be delayed until after the merger as they threatened it at one time. The merger, the first of its kind in the United States, has proved successful.

RUNNING COSTS

1278. WIFF, M. von. Die ungewisse Zukunft der Spitalaufwendungen. **[The uncertain future of hospital expenditure.]** *Veska*, Aarau, 1975, May, vol. 39, no. 5, pp. 220-223.

In Switzerland the cost per patient day increased from Fr. 11.80 in 1947 to Fr.147.78 in 1973, of which labour costs increased from Fr.4.87 to Fr.102.56. Any attempt to forecast the level to which costs may rise in the future is fraught with difficulties and uncertainties. However, based on past experience the following figures, in Swiss francs per patient day, are likely to be reached (the figures in parenthesis are for labour costs only): 1975, 190 (134); 1980, 385 (287); 1985, 788 (617). If however the working week were reduced from 45 to 40 hours, and this was met by increasing staff complements, labour costs per patient day (in francs) would be 147 in 1975, 316 in 1980 and 679 in 1985, representing 90 per cent of total costs; if met by overtime payments the figures would be: 1975, 150; 1980, 323; and 1985, 694, representing 92 per cent of total costs.

BED OCCUPANCY, ECONOMIC USE OF BEDS

See also Abstract Nos. 1321, 1370

1279. SMITH, R. G. and LOWTHER, C. P. **Blocked beds.** *Health Bulletin*, Edinburgh, 1975, May, vol. 33, no. 3, pp. 112-113.

In a teaching hospital group in Edinburgh, when an application is made from the medical wards for a patient to be placed on the geriatric waiting list, the patient is examined and placed on the list if found to be requiring admission to geriatric assessment or long-stay wards. This study: (i) enumerated all patients on the geriatric waiting list on January 1 in each of the years 1967, 1969, 1971 and 1973; (ii) added all patients placed on the list until December 31 of each of the years; (iii) calculated the total number of bed days occupied by all geriatric waiting list patients and also the number occupied by these patients in the medical wards; and (iv) examined case records to reveal the subsequent placement of these patients. The results show: (i) the percentage of beds occupied by geriatric waiting list patients rose from 8.5 per cent in 1967 to 18.1 per cent in 1973; (ii) the number of hospital waiting list patients admitted to the geriatric assessment unit has decreased in spite of a small increase in the number of beds available and in spite of efforts to pursue positive preventive geriatric policies; and (iii) if the rising tide of misplaced geriatric patients is to be contained, attention

will have to be focused immediately on the problem of providing more beds for the geriatric service.

DATA PROCESSING

See also Abstract Nos. 1246, 1287, 1288, 1328, 1336, 1340, 1341, 1344, 1346, 1347, 1367

1280. FORSTMOSER, P. EDV und Persönlichkeitsschutz. **[EDP and privacy.]** *Veska*, Aarau, 1975, June, vol. 39, no. 6, pp. 285-287.

Existing legislation in Western Germany does not provide adequately for the protection of confidentiality when medical information is processed by a computer centred outside the hospital. To put this right two proposals for amending legislation are put forward. The first is that medical secrecy should be imposed on persons commissioned by doctors as well as on doctors themselves and their assistants. In this way the staff of data banks working for doctors, even though they were not directly responsible to doctors, would be bound by the rules of medical secrecy. The second proposal is that data bank staff should be bound by a special professional secrecy analogous to that which already exists for doctors, lawyers, bankers and religious workers. There must be a reasonable compromise between confidentiality and the legitimate needs of medical practice: when there is any doubt confidentiality must be given priority.

1281. ROSE, J. and MITCHELL, J. H., editors. **Advances in medical computing: proceedings of the Third International Symposium on Computers in Medicine.** Edinburgh & London, Churchill Livingstone, 1975, x, 189pp. £8.50

The papers given at this symposium covered a wide range of applications of computers, including their use in laboratories, medical records, follow-up procedures, out-patient clinics, intensive care units and Hospital Activity Analysis.

1282. SPIELMANN, J. von. Der Patient und die EDV. **[The patient and EDP.]** *Veska*, Aarau, 1975, June, vol. 39, no. 6, pp. 281,284.

The Insel Hospital, Berne, with 20,000 in-patients and 50,000 out-patients a year, is developing an on-line electronic data processing system. The first stage is the Patient Admission System (PAS), which is described in this paper. A network of terminals (36 viewing screens and seven printer terminals) is linked by telephone with the central computer. The planning, analysis and programming (60 programs) of PAS took 12 man-years. The system has four functions: pre-admission (notification of ward or out-patient clinic, questionnaire, personal data); admission (recording location, informing departments, medical records, etc); transfers within the hospital; and discharge. The system also covers casualty patients and the casualty department has a magnetic card typewriter terminal for recording data out of hours, when the computer is not operating, for later transmission. PAS has two separate numbering codes: one for personal identification of patients (PID) and one for case or 'stay' identification (SID), the latter for each separate treatment of a patient.

SECRETARIAL SERVICES

See Abstract No. 1331

LIBRARIES

1283. WEST, K. M. **Library and information services for small hospitals.** *Journal of the American Medical Association*, Chicago, 1975, May 5, vol. 232, no. 5, pp. 505-508.

In the United States 76 per cent of hospitals have less than 200 beds and 55 per cent have less than 100. It is estimated that because of expense fewer than 10 per cent of the latter can provide even the minimal standards recommended by the American Library Association. Co-operative arrangements between libraries provide an answer to the problem. The country is fully covered by 11 Regional Medical Library programmes sponsored and financed by the National Library of Medicine (NLM). In most areas there are one or more consulting medical librarians who will advise on planning information services according to local needs. A medical records officer or a secretary can be sent to a nearby medical library for a few days training on organizing a small collection of books, journals, etc and becomes a part-time 'information assistant'. This assistant works in co-operation with the library of a larger hospital and has access to sources such as the nearest medical school library, the Regional Medical Library or the NLM. The Regional Medical Libraries and other major libraries supply many services (including photocopies in some cases) free to small hospitals. Approximate annual costs for a hospital of about 90 beds would be $800 for back-up and consultancy services; books and journals $1,300; salary to cover the approximate 20 per cent of the assistants' time spent on library work $1,200; phone calls, supplies, equipment, etc. $600; making a total of about $3,900. There are many useful guides to help the assistant and the administrator. Some of these are included in the list of 41 references given.

1284. ONTARIO MEDICAL ASSOCIATION and others. **Canadian standards for hospital libraries.** *Canadian Medical Association Journal*, Ottawa, 1975, May 17, vol. 112, no. 10, pp. 1271-1274.

These standards were accepted in December 1974 by the major Canadian associations concerned with hospital libraries, and were prepared by a working party established by decisions of the Association of Canadian Medical Colleges and of the Health Sciences Division of the Canadian Library Association. The proposals are designed as minimum standards, and are based on existing standards in Britain, the United States and French Canada. They are intended for staff libraries, rather than patient library services which are usually provided by the local public library. The four basic standards concern: (i) objectives, organization and administration; (ii) staffing and personnel qualifications; (iii) nature and scope of services; and (iv) facilities and equipment. These are presented as guides only, and statistics enumerating the necessary space, books and journals and categories of staff are presented later in a series of appendices. The effectiveness of library activities is considered to result largely from the quality of library staff employed, and the hospital library is conceived

as a line department of the hospital, directly responsible to the administration, and with its own independent budget.

ORGANIZATION AND METHODS, WORK STUDY

See Abstract No. 1361

MEDICAL RECORDS

See also Abstract Nos. 1347, 1365-1367

1285. BERNI, R. and READEY, H. **Problem-oriented medical record implementation: allied health peer review.** Saint Louis, C.V. Mosby, 1974, xiv, 183pp. £2.85

The purpose of this book is to provide a set of guidelines in the use of problem-oriented medical records for allied health professionals. It does so by presenting examples of the system's implementation and maintenance in several large and small health service facilities in the United States and Canada. The book is in five parts: (i) system description; (ii) system implementation; (iii) system evaluation; (iv) system modification and computerization; and (v) system implementation model.

1286. EASTON, R. E. E. **Problem-oriented medical record concepts.** New York, Appleton-Century-Crofts, 1974, xviii, 158pp. £5.50

This book attempts to define problem-oriented medical record concepts, as they relate to an individual patient, with such clarity that any member of the health care team, medical or paramedical, will be able to understand and adopt them to his or her own discipline. There are chapters on: the difference between source- and problem-oriented records; problem list concepts; data base concepts; the process of data base definition; the components of a patient care note; problem types and action categories; flow sheet concepts; problem-oriented patient care instruction concepts; non-problem data; and audit concepts. A list of 75 references to the literature is included.

1287. THEIMER, P. A. **Patient identification and the central index.** *Dimensions in Health Service*, Toronto, 1975, May, vol. 52, no. 5, pp. 14-17.

Mount Sinai Hospital, Toronto, has been operating a central index and filing system based on social insurance numbers for a full year. Reasons for adopting the social insurance number are given. All patients are issued with a plastic identification card to facilitate identification of documents, requisitions, etc., and also the completion of health insurance claims. The layout follows that of the social insurance card and of the Ontario Health Insurance Plan claim card. Cards are embossed in two locations, admission office and ambulatory registration and reception desk, using FIMA electronic keyboard embossers. The hub of the system is the central index, a division of the medical records department. The 2.7 by four inches plain index cards are filed in two Remington Kardveyors with a combined capacity of 336,000 cards. The procedures used are outlined.

1288. WEYL, S. and others. **A modular self-describing clinical databank system.** *Computers and Biomedical Research*, New York & London, 1975, June, vol. 8, no. 3, pp. 279-293.

Data banks containing detailed medical information have been established for specific

divisions of Stanford Medical Center using a table-driven computer system designed to record and analyse medical record data. The data bank developed in the Division of Immunology over the past three years includes data from over 5,500 patient visits. Nine months of experience in several other specialties has demonstrated the usefulness and generality of the approach. The system offers administrative procedures to generate patient summaries and back up manual records, create graphical flowcharts, and print lists of selected patients. As an educational and research tool, the system provides 'information services', including tabulations, graphical illustrations and statistical analyses of medical variables. These services support patient care decisions by analysis of stored clinical experience. By increasing the information available to practising physicians, medical specialty data banks may reinforce clinical practice sufficiently to allow modular expansion into a hospital network.

LEGAL ASPECTS OF HOSPITAL ADMINISTRATION

See Abstract No. 1318

FINANCE AND ACCOUNTING

FINANCE

1289. FINDLAY, M. C. and JORDAN, R. **Hospital leasing decision models.** *Omega*, Oxford, 1975, June, vol. 3, no. 3, pp. 345-350.

Rapidly rising costs and a decline in philanthropy have forced hospitals in the United States to make extensive use of debt in all forms, especially leasing. The major purpose of this paper is to adapt commercial leasing decision models to the hospital field. The appropriate use of alternative formulations is considered in conjunction with an example from the hospital literature. Finally, certain theoretical problems of leasing in a non-profit environment are considered.

1290. **Philanthropy in health care.** *Hospitals*, Chicago, 1975, June 1, vol. 49, no. 11, pp. 47-52, 57-59, 63-66, 71-72, 74-76, 81-84, 87-90, 95-96, 98, 126.

This feature is concerned with the role of voluntary and charitable contributions in the provision of health care facilities in the United States. It includes papers on: the threats of national health insurance and tax reform to private sources of funds: the importance of the manner in which fund raising is conducted; how to predict success in fund raising; the encouragement of annual giving; gifts in trust; fund raising in poor communities; and establishing hospital foundations. There are also short items on the role of the American Hospital Association and National Association for Hospital Development, special fund raising events, and tax deductions for charitable gifts and bequests.

1291. ANDREOPOULOS, S., editor. **National health insurance: can we learn from Canada?** New York & London, Wiley, 1975, xxii, 273pp. £6.25.

The papers in this volume, given at the 1974 Sun Valley Forum on National Health, review the Canadian experience with national health insurance with particular reference

to the implications for the United States. They are arranged in five parts: historical perspective; economic perspective; the public interest and the profession; implications for the United States; and conclusions.

HOSPITAL ACCOUNTING

1292. DIJL, P. W. van. De doeleinden van kostencalculatie voor ziekenhuizen. **[The purposes of hospital costing.]** *Instelling-Management*, Den Haag, 1975, May, vol. 7, no. 6, pp. 22-25, 27.

The four main purposes of hospital costing are listed as follows: to determine charges; to provide information on the hospital's financial position; to control efficiency by, amongst other things, providing comparisons with other hospitals; and to help with decisions on capital expenditure and on the possible use of outside services. Each of these is discussed separately. While the existing hospital accounting systems in use in the Netherlands are adequate for some of these objectives a plea is entered for more detailed cost accounting.

SUPPLIES AND STORES

1293. AMMER, D. S. **Purchasing and materials management for health care institutions.** Lexington, Mass., D.C. Heath, 1975, xvi, 173pp. £6.50.

The author made a study of hospital purchasing and materials management based on data from 500 non-profit general hospitals with at least 150 beds. The deficiencies noted in this study led him to write this book, the basic purpose of which is to meet the need for a more positive approach concerned with the right ways to do the job. There are chapters on: the materials management problem; goals and organization; make, buy, or lease; purchasing basics; purchasing problems; pricing of health care products; cost reduction through standardization, value analysis and group purchasing; basic principles of inventory management; economics of inventory management; order points, review periods and safety stocks; how much to buy and when to buy it; problems with multiple stocks and forecasting; and measurement of materials management performance.

PURCHASING

See Abstract No. 1289

ECONOMIC USE OF SUPPLIES, DISPOSABLES

1294. LANE, R. J. **Utopian dream or dissolute dilettantism.** *Hospital Equipment & Supplies*, London, 1975, June, vol. 21, no. 6, pp. 31-36.

This paper discusses the development of the use of disposables in hospital, with particular reference to the criteria to be used when deciding whether or not to use them. The introduction of disposables was made possible by developments in plastics,

paper and packing and advances in sterilization. The need to control hospital infections provided an incentive for their use. Later however there was a period of considerable reassessment of their use, mainly from the point of view of escalating costs. Today there should be equally fundamental consideration of the principle of disposability on the grounds of employment, the proper conservation of waning resources, new thoughts about re-cycling and even ecological considerations.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

1295. KLAASSEN, A. Invoering van convenience-foodsystemen totaal ander management. **[Introduction of convenience foods system is total change in management.]** *Voeding- en Huishoudgids*, Amsterdam, 1975, May 20, vol. 42, no. 507, pp. 265, 267, 269, 271.

The choice of a catering system for a hospital can only be decided with reference to the particular requirements of that hospital, the needs of the consumers, and the money which can be allocated to it. The merits of a refrigerated food service, of deep-frozen or of contract catering cannot be assessed in isolation but only in relation to the conditions and requirements of each individual hospital. It must also be borne in mind that the management of a convenience food catering system is entirely different from that needed where all food is prepared within the hospital.

1296. BALSEY, M. B. **Hospital mergers and multi-hospital units: impact on foodservice and dietetics.** *Journal of the American Dietetic Association*, 1975, June, vol. 66, no. 6, pp. 609-613.

The effect of mergers and multihospital systems on the organization and operation of catering services is discussed with reference to three examples in the United States and briefer reference to five others.

1297. HOSPITAL RESEARCH AND EDUCATIONAL TRUST. **On-the-job training: a practical guide for food service supervisors.** Chicago, Hospital Research and Educational Trust, 1975, vi, 96pp.

This guide was developed to assist first-line catering supervisors in the application of the Trust's basic training programme for catering staff. It is based on one of the best known methods of teaching job skills to adults — job instruction training (JIT). The guide covers: preparing for a JIT lesson; conducting a JIT lesson; evaluating a JIT lesson; and examples of lessons.

1298. De Wever-Ziekenhuis te Heerlen acht experiment met contract-catering definitief mislukt. **[Experiment with contract catering at Wever Hospital, Heerlen, is a definite failure.]** *Voeding- en Huishoudgids*, Amsterdam, 1975, May 20, vol. 42, no. 507, pp. 260-263.

In January 1974 the Wever Hospital, Heerlen, embarked on an experiment in contract catering which was originally planned to last six months. At the end of that

period certain defects in the system had come to light and it was decided to extend the experiment in an adapted form before making a final decision. At the end of April 1975 it was decided to end the experiment and revert to the previous conventional system as from July 1975. The reasons for this decision were that the expected financial savings were not realized and the improvement in the quality of meals, which had been hoped for, did not take place. The Wever Hospital's experiment had been watched with interest by a number of hospitals in the Netherlands and the decision not to adopt contract catering is likely to influence them.

1299. SHOOS, K. J., KRIZELMAN, S. L. and NEWBOLD, P. A. **Contracted management can improve productivity.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 80-82.

The administrators of St. Luke's Hospital, Cleveland, a 457-bed teaching hospital investigated methods of improving catering services. Details are given of the procedure which led to the award of a contract to a food service company to manage the catering department, retaining the hospital's catering staff, as the best solution.

DIETETICS IN THE HOSPITAL

1300. COUNCIL FOR PROFESSIONS SUPPLEMENTARY TO MEDICINE. DIETITIANS BOARD. **Dietitians of the future: a report by a working party of the Dietitians Board. (Chairman: Professor Ian Macdonald)** London, Council for Professions Supplementary to Medicine, 1975, 36pp.

The working party was set up in 1973 to consider the future role and function of dietitians and the education and training appropriate to them. The report is in two parts; role and function, and education and training, together with a summary of conclusions, recommendations and suggestions.

LAUNDRIES AND LINEN SERVICE

LAUNDRIES

1301. BELLINGER, H. and GRUND, H. Hygienisch einwandfreie Krankenhauswäsche—ein gelöstes Problem. **[Hygienically satisfactory hospital laundering—a problem solved.]** *Österreichische Krankenhaus-Zeitung*, Wien, 1975, May, vol. 16, no. 5, pp. 304-305, 307-314, 317.

The aim of this paper is to provide the 'interested reader' with basic information about the requirements of a hospital laundry and to explain the importance of proper disinfection procedures. There is first a brief account of the main types of washing machine in use and this is followed by a description of the thermal and chemothermal procedures which disinfect during laundering and the requirements they have to meet. The use of disposable articles, while showing certain advantages, does not reduce costs when the expense of disposal is taken into account.

HYGIENE IN THE HOSPITAL

1302. MICHAELSEN, G. S. **Evaluating the hospital environment.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 69-72.

A quantitative method for evaluating environmental health and safety factors in a hospital is presented. It is based on a table which assigns numerical 'weights' to 25 environmental factors in each of 22 hospital departments. A second table shows how these weights are applied to a particular department—the isolation area.

HOSPITAL INFECTIONS

1303. GREEN, J. R., KANSHEPOLSKY, J. and TURKIAN, B. **Incidence and significance of central nervous system infection in neurosurgical patients.** *Advances in Neurology*, New York, 1974, vol. 6, pp. 223-228.

During a two-year period, 2,871 neurosurgical patients were treated at the Barrow Neurological Institute, St. Joseph's Hospital and Medical Center, Phoenix, Ariz. Nosocomial infections occurred at a rate of 4.7 per cent for shunting, 2.6 per cent for craniotomies, 2.3 per cent for laminectomies, laminotomies, and anterior cervical fusions, and 0.47 per cent for stereotaxic operations. The overall rate was 2.3 per cent; other studies have reported rates ranging from 0.5 to 10 per cent. The lowest current rates of neurosurgical infection appear to be in three institutions that have paid close attention to aseptic techniques and have added the use of bactericidal ultraviolet radiation in the operating theatre. In spite of the low incidence, neurosurgical infection is significant because it causes increased morbidity and higher costs from prolonged length of stay.

1304. HYAMS, P. J. and others. **Staphylococcal bacteremia and hexachlorophene bathing: epidemic in a newborn nursery.** *American Journal of Diseases of Children*, Chicago, 1975, May, vol. 129, no. 5, pp. 595-599.

An outbreak of staphylococcal bacteraemia in healthy, full-term neonates occurred in the newborn nursery at a large county hospital not using prophylactic hexachlorophane bathing. The outbreak followed a six-month preliminary study that showed a rise in staphylococcal colonization rate from 2.2 per cent with hexachlorophane bathing to 67 per cent with a non-hexachlorophane-containing preparation. It is concluded that hexachlorophane may have provided an important protective effect for babies in this nursery. More information is essential, therefore, concerning the proper use of hexachlorophane, or, alternatively, a new prophylactic antimicrobial bathing preparation should be sought.

1305. BOYER, K. M. and others. **An outbreak of gastroenteritis due to *E. coli* 0142 in a neonatal nursery.** *Journal of Pediatrics*, St. Louis, 1975, June, vol. 86, no. 6, pp. 919-927.

Over a nine-month period, 59 epidemiologically linked cases of gastro-enteritis caused by *Escherichia coli* 0142, including 21 intractable cases with four deaths, occurred in the nurseries of Maricopa County General Hospital, Phoenix, Ariz. Environmental

studies showed that exposed surfaces and air were definable but probably insignificant environmental reservoirs of the epidemic strain. Isolation from the hands of staff in five instances directly incriminated hand carriage as the mode of spread. 'Triple' handwashing with three per cent hexachlorophane soap did not change the prevalence of focal coliforms on the hands of staff, but a significant decrease occurred during the use of disposable gloves.

SOURCES OF INFECTION

1306. LIDWELL, O. M. and others. **Transfer of micro-organisms between nurses and patients in a clean air environment.** *Journal of Applied Bacteriology*, London, 1974, Dec., vol. 37, no. 4, pp. 649-656.

A uni-directional downflow (laminar flow) ventilation system for a single-bed patient room is described. It produced clean air at velocities as low as 0.12 m./sec. Bacteriological studies on bed-making done in the room showed that strains of *Staphylococcus aureus* carried on the nurses' external clothing were often transferred to the patients' bedclothes. This possible route of patient infection was almost eliminated when the nurses wore disposable plastic aprons over their dresses.

1307. BAMERT, P. and ROTH, F. Bakterienpropagation durch Atemluftbefeuchter. **[Humidifiers as a source of bacteria.]** *Schweizerische medizinische Wochenschrift*, Basel, 1974, Dec. 14, vol. 104, no. 50, pp. 1856-1859.

A series of experiments has demonstrated that humidifiers can be dangerous disseminators of bacterial contamination. Different types of humidifiers were contaminated with *Pseudomonas aeruginosa* and the humidified gas produced by them examined for bacteria. Humidifiers working on the venturi principle or ultrasonic nebulizers disseminated bacteria on a large scale. Less heavily involved were devices where gas bubbles through water (Cascade, ISV). Virtual absence of bacterial dissemination was found only in 'draw over' nebulizers, but this type does not meet clinical requirements. Every possible step must be taken to prevent contamination of the apparatus.

PREVENTION AND CONTROL

See also Abstract No. 1310

1308. GREAT BRITAIN. DEPARTMENT OF HEALTH AND SOCIAL SECURITY. **Report of the Working Party on the Laboratory Use of Dangerous Pathogens. (Chairman: Sir George Godber)** (Cmnd. 6054) London, Her Majesty's Stationery Office, 1975, iv, 40pp. £0.55

Pathogenic micro-organisms are now handled extensively for research, teaching, diagnostic and production purposes in a wide variety of institutions, including hospitals. Exotic and dangerous pathogens may also be present in specimens sent to diagnostic laboratories not normally expecting to receive them. This report discusses the nature and extent of the problem and makes proposals for control measures.

Although a voluntary system of control is proposed because of the need to take urgent action to minimize the risks, the working party feels it is necessary to back the voluntary measures with statutory powers. Appendices include a classification of pathogens, results of a survey of the use of pathogens, and a suggested code of practice.

HYGIENE IN THE OPERATING THEATRE

1309. RENAUD, D. Un procédé nouveau de désinfection des salles d'opération. **[A new disinfection procedure for operating theatres.]** *Techniques Hospitalières*, Paris, 1975, Feb., vol. 31, no. 353, pp. 50-54.

Air-conditioning has not prevented the infection of operating theatres, but by creating greater movement of particles has increased the danger. This paper first examines some existing methods of disinfecting operating theatres. It then describes a new method which involves the introduction of formaldehyde through the air-conditioning system when the theatre is unoccupied. Experiments at the University Hospital Centre, Nancy, have shown that the results are encouraging, in spite of the precautions that have to be taken, with bacterial destruction being almost total.

STERILIZATION

1310. THOFERN, E. and BOTZENHART, K. Fehlermöglichkeiten und Kontrolle bei der Sterilisation und der Desinfektion. **[Possible failure and control of sterilization and disinfection.]** *Krankenhaus*, Stuttgart, 1975, May, vol. 67, no. 5, pp. 184-188.

The principles, possible faults and control of sterilization by hot air, autoclaving and ethylene oxide are outlined. Disinfection can be either by steam or by chemicals. The former requires a permanent installation while the latter can be carried out in almost every part of the hospital. The main disinfectants used in hospitals are alcohols (ethanol, propanol), aldehydes, phenol derivatives, halogens, and quaternary ammonium compounds: the uses and characteristics of each are described.

1311. ASSOCIATION OF STERILE SUPPLY ADMINISTRATORS. **Training handbook for sterile supply department assistants.** Godalming, Training Aids Unit, 1975, [ii], 73pp. £1.50.

The aim of this handbook is to provide, simply and clearly, information relevant to the duties of central sterile supply department (CSSD) assistants in a form which would provide a handy source of reference, be of value to CSSD assistants and assist managers and others conducting in-service training programmes. Procedures and methods in general use are recorded in detail, many illustrated with photographs, etc.

1312. PRATT, D. E. **A training program for central service.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, June, vol. 17, no. 6, pp. 76, 78.

The expansion programme of Belleville (Ont.) General Hospital included a supply, processing and distribution system which absorbed the old central supply department in its new role of supplier of all medical surgical supplies and equipment. When it

became difficult to recruit the necessary staff, the hospital joined with a local technical college to provide training to ensure a supply of technicians. The 15-week course includes 284 hours of classroom instruction and 81 hours of practical work in the hospital itself. A brief outline of the main areas of the course is given. An extension course lasting four hours a week for 20 weeks has been arranged to update existing staff.

SAFETY MEASURES

See Abstract No. 1302

ACCIDENTS, GENERALLY

1313. NOCK, F. **Analysis of 'incident reports' at Kingston Centre.** *National Hospital*, Chippendale, N.S.W., 1975, March/April, vol. 19, no. 2, pp. 20-21.

A survey carried out at Kingston Centre Geriatric Hospital, Victoria, Australia, during 1970 to 1972 analysed in detail accidents involving falls amongst patients. Statistics collected in tabular form show how many accidents occurred during each month over the three years, where accidents occurred and a detailed analysis of type of injuries and the times of day when accidents are most likely to occur for 1972. Results showed that fewer falls occurred in April or December, when patients were happiest due to Easter or Christmas visiting from relatives. Most accidents occurred at the bedside, as patients were getting in and out of bed, whilst many others occurred when patients were going to or from or were in the bathroom. The danger period of the day seemed to be when there was most activity in the ward, although this was when the highest number of staff were in attendance. Only a small percentage of accidents analysed for 1972 showed negligence by staff. It is hoped this analysis will help to reduce such falls and the resulting injuries.

ACCIDENTS IN GAS AND DRUG ADMINISTRATION

See Abstract No. 1247

FIRES AND FIRE PREVENTION

1314. TWELLS, J. D. **Applications of the 1971 Fire Precautions Act to hospital building and engineering design.** *Hospital Engineering*, Stevenage, 1975, June, vol. 29, pp. 3-5, 7.

A designation order is shortly to be made by the Home Office which will oblige hospital authorities to comply with the provisions of the Fire Precautions Act, 1971. It will be for a hospital's engineers, works, professional and administrative staff, working as a team, to see that the local fire officer's recommendations take into account the special conditions relating to patients and hospital routines. The paper summarizes what is being done by the Department of Health and Social Security and the National Health Service under six heads: drawing attention to the code of practice

on estate management; research and development into the technology of hospital fire precautions; a detailed analysis of an old hospital; planning exercises with medical, nursing and administrative staff; the setting up of a working party on regulations; and co-ordination of fire precaution training for works professionals.

PLANNING FOR MASS EMERGENCIES

1315. FINCH, P. and NANCEKIEVILL, D. **The role of hospital mobile medical teams at a major accident.** *British Journal of Hospital Medicine*, London, 1975, May, vol. 13, no. 5, pp. 601-604, 609-610.

St. Bartholomew's Hospital, London, has had to deal during the past two years with three major accidents involving large numbers of casualties. A major accident plan has therefore been developed. The efficiency of this is discussed with particular reference to the Moorgate tube train disaster of February 1975, when 41 casualties were sent to the hospital. The management of medical teams at this accident site eventually worked well, but largely due to the versatility of medical staff involved rather than to the major accident plan. The plan failed to result in adequate protective clothing or sufficient amounts of the right type of equipment being available since it was too complicated. The development of a simple scheme for the despatch of a well-equipped resuscitation team had been neglected. Following their personal experiences at Moorgate, the authors present a guide to division of manpower in such accidents: (i) the assessment team, which is sent out if the extent of the accident is unknown; (ii) the resuscitation team, sent out at the request of (i) or immediately if a major accident has been declared; and (iii) the surgical team, consisting of a surgeon and anaesthetist experienced in traumatic surgery, who should remain at the base hospital until called for by the resuscitation team.

THE PATIENT

ADMISSION AND RECEPTION

See Abstract No. 1282

WELFARE OF THE PATIENT

See also Abstract No. 1369

1316. HAYWARD, J. **Information—a prescription against pain.** (The Study of Nursing Care Project Reports, Series 2, No. 5) London, Royal College of Nursing, 1975, 151pp. £1.30

The purpose of this study was to examine the effects of giving information to patients about events leading up to, and following, a surgical operation, and to attempt an evaluation of this procedure in terms of appropriate dependent variables associated with patient welfare. The report is in three sections: theoretical considerations; pilot

study; and main study. The main experimental hypothesis was that patients who were given information appertaining to their illness and recovery would, when compared to an appropriate control group, report less anxiety and pain during the post-operative recovery period. This was upheld for the total samples from both hospitals in the main study and for one of the two sub-groups from the second hospital. This finding supports the contention that 'informed' talking is more effective in this context than 'just talking'.

1317. AUTTON, N. **Visiting ours: a layman's guide to hospital visiting.** Penarth, Church in Wales Publications, 1975, 127pp. £1.00

The main purpose of this book is to provide the layman with useful information about sick visiting and so help him function as part of a pastoral or work team from the community alongside the clergy in local hospitals. There are chapters on: why to visit; the health services; at the bedsides; in the wards; partners in healing; and the visitor himself.

1318. SKEGG, P. D. G. **'Informed consent' to medical procedures.** *Medicine, Science and the Law*, Bristol, 1975, April, vol. 15, no. 2, pp. 124-132.

Several areas of English law have some bearing on the information a doctor must disclose before obtaining consent to a medical procedure. Information which suffices in one area will not always do so in another and it is misleading to imply that there is a single doctrine of 'informed consent'. The whole question is discussed in detail in relation to the requirements of the crime and tort of battery and the extent to which these requirements are sometimes supplemented by the tort of negligence and the tort of deceit.

HOSPITAL SOCIAL WORK

See Abstract Nos. 1356, 1358

TRANSPORT OF PATIENTS

1319. WADDELL, G. **Movement of critically ill patients within hospital.** *British Medical Journal*, London, 1975, May 24, vol. ii, pp. 417-419.

This paper presents the results of two studies made at the Western Infirmary, Glasgow. The first analysed the effects of movement within the hospital on 55 patients admitted to the Infirmary's intensive therapy unit (ITU) during a five-month period. All moves were carried out routinely by ITU staff. Significant changes during and after movement, including cardiovascular changes, were seen in seven patients who had been stable before movement. Major cardiorespiratory collapse or death as a result of movement thus occurred in about one patient per month. The incidence of serious effects was higher in intra-hospital movement than in ambulance transport, presumably because intensive treatment can be maintained within the ambulance, whilst within the hospital even simple measures such as traction are often disturbed. The movement of seriously ill patients within the hospital must therefore be adequately prepared and

not undertaken unless it is essential and trained medical staff are available to supervise. In the second study, 70 post-operative surgical patients were examined for effects of movement from the operating theatre to the ward. Readings of heart rate and blood pressure were first made to ensure stability before movement. However, stability was largely maintained during the moves due to adequate care and preparation by staff. Two tables and four diagrams illustrate the results of the studies.

HOSPITAL CARE

See also Abstract Nos. 1259-1262, 1316, 1359, 1369, 1370, 1374, 1375

1320. WARD, A. W. M. **Terminal care homes.** *Hospital and Health Services Review*, London, 1975, July, vol. 71, no. 7, pp. 233-236.

The development of homes for the care of the terminally ill in Britain is traced, identifying three different sources of initiative—religious, medical and lay. The total picture is one of considerable diversity as to means of funding and method of operation. Nearly all homes depend on continuing voluntary support both financial and practical and demonstrate a co-ordination of medical, religious and lay involvement in an enterprise which lends itself to personal and compassionate service.

1321. LEONARD, J. V., CLAYTON, B. E. and COLLEY, J. R. T. **Use of biochemical profile in children's hospital: results of two controlled trials.** *British Medical Journal*, London, 1975, June 21, vol. ii, pp. 662-665.

Two controlled trials of the use of a biochemical profile were conducted at the Hospital for Sick Children, London, to see whether the profile led to diagnoses which would not otherwise have been made and to see what effect it had on the number of extra requests for pathological investigations and the length of stay in hospital. Altogether 2,816 patients were examined and 13 new diagnoses made. There was a significant increase in the total number of pathology requests but the profile did not alter the length of stay in hospital. It is concluded that the profile made only a small contribution to the overall care of the patients.

1322. COSTANZO, G. A. and VERTINSKY, I. **Measuring the quality of health care: a decision oriented typology.** *Medical Care*, Philadelphia, 1975, May, vol. 13, no. 5, pp. 417-431.

Numerous methodologies have been devised to measure various aspects of the quality of health care. This paper is an attempt to devise a useful framework for cataloguing these methods in order that health care planners and administrators can readily assess the means available to quantify aspects of health care under their scrutiny. A decision tree is presented for the decision maker to follow through according to his requirements, and a discussion presents a brief summary of the methods in each particular category. Gaps indicating the need for further research are identified.

1323. MARTIN, M. T. **Medical audit—a contagious idea.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, May, vol. 17, no. 5, pp. 36, 38.

In order to re-vitalize the medical audit system at Humber Memorial Hospital, Toronto, a group consisting of the administrative resident, the chairman of the medical

audit committee and the director of the medical records department was appointed to review the literature on the subject and to study the systems at St. Joseph's Hospital, Hamilton, Ont., and St. Vincent Hospital, Worcester, Mass. The best components of these two systems were developed to meet the needs of Humber. The format for the development of audit topic criteria consisted of: (i) justification—diagnosis, indications for procedures, etc.; (ii) process—history, examinations, tests; and (iii) outcomes—covering complications, length of stay, mortality, etc. As many medical staff as possible are involved in the development of criteria and there are sub-committees of the medical audit committee for each service. When all the necessary criteria exist and all inputs have been considered the study is passed to the medical records analyst who extracts the information required from the medical records. This is entered on a data display sheet. Advantages of the system are that the medical audit committee need to examine fewer charts yet they have objective criteria on which to base their recommendations. These are recorded on an 'analysis of variations and deviations' sheet, copies of which go to the chief of the service concerned, the medical advisory committee and the executive director. A follow-up procedure to ensure that recommendations are carried out is essential.

HOME CARE, AFTER-CARE

See Abstract Nos. 1371, 1373, 1376

SPECIAL DEPARTMENTS

OPERATING SUITES

See Abstract No. 1309

ANAESTHESIA

See also Abstract Nos. 1362, 1363

1324. PARKHOUSE, J. **Anaesthetics in the Manchester region.** *British Journal of Anaesthesia*, London, 1975, May, vol. 47, no. 5, pp. 607-614.

A questionnaire was sent to consultants and medical assistants in the Manchester Region to seek information about how anaesthetists occupy themselves professionally and what satisfactions and frustrations result. The findings are presented in 23 tables and are discussed.

PHARMACY

1325. JEFFREY, L. P. and MAHONEY, C. D. **Training, utilization and motivation of pharmacy technicians—a five-year analysis.** *American Journal of Hospital Pharmacy*, Washington, 1975, May, vol. 32, no. 5, pp. 491-494.

Rhode Island Hospital, Providence, has had a formal pharmacy technician training programme since 1969. The current course consists of 15 40-hour weeks and en-

compasses both theoretical instruction and on-the-job training. Trainees are paid 70 per cent of the starting salary of a technician during training. The admission requirements and training programme are outlined. Since its inauguration, 41 trainees have been accepted into the programme; 33 (80 per cent) graduated and 13 (39 per cent) are still employed in the hospital. An advanced training programme has been established to train technicians for more specialized and more sophisticated assignments.

1326. REICH, J. W. **A model for the management of a hospital pharmacy staffed by specialized pharmacists.** *Hospital Pharmacy*, Philadelphia, 1975, May, vol. 10, no. 5, pp. 192-194, 199.

With the trend towards specialized practice in hospital pharmacy, a need has developed for an appropriate management structure. In the plan presented in this paper, the pharmacy service is divided into five separate functional sub-systems or groups: drug information; out-patient services; in-patient and clinical services; administration and records; and manufacturing and packaging. Each functional group includes all pharmacists working in one specialty area, including the assistant director assigned to that area. Each group makes up one functional committee, which meets at regular intervals. The integrating committee, which consists of the director of pharmacy services and an elected representative from each functional committee meets about once a month. It has two basic functions: co-ordination of procedures and overall policy making.

1327. DICKEY, F. F., MATTAR, M. E. and CHUDZIK, G. M. **Pharmacist counseling increases drug regimen compliance.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 85-86, 88.

An initial study of 100 out-patients in the Children's Hospital, Buffalo, N.Y., following a course of drugs showed that only five per cent successfully completed the 10-day course and that 59 per cent had taken less than half of the prescribed drugs. It suggested that incorrect dispensing, inadequate labelling and instruction on the use of drugs, and difficulties of measuring liquid doses accurately affected this. In a follow-up study of a similar sample of 34 patients, detailed verbal and written instructions and a measuring device were given to parents by the hospital pharmacist; a control group of 200 used community pharmacies. The results showed that 50 per cent of the specially instructed group successfully completed the course of drug treatment but only 8.5 per cent of the control group.

1328. ELLIOTT, R. K. **Computerized drug inventory controls on a budget.** *Hospital Pharmacy*, Philadelphia, 1975, May, vol. 10, no. 5, pp. 184, 187-189.

The 360-bed Bethesda Hospital, Zanesville, Ohio, which has no computer of its own, has computerized its drug inventory control system by using the computer of a local wholesale drug company on a fee for use of computer time basis. The program for purchasing and inventory control is identical to that used by the drug company. Brief details are given of the procedure followed, the input forms and printout. The computer has also been used for the development and maintenance of a hospital formulary. The scheme has resulted in: (i) total inventory control with adequate pharmacist involvement; (ii) a 20 per cent reduction in stock levels in the first six months; (iii) a reduction of about two-thirds in clerical time involved with the mechanics of inventory control; (iv) constantly updated price lists; and (v) a functional hospital formulary.

1329. DANIELS, H. L. **A monitored system of control of pharmaceuticals of limited shelf life.** *Journal of Hospital Pharmacy*, London, 1975, June, vol. 33, no. 3, pp. 55, 57.

At St. David's Hospital, Cardiff, drugs are stored in boxes and those which have an expiry date are colour-coded to indicate the year of expiry. These are checked every month and where appropriate a letter goes to the manufacturer asking whether replacement is possible. In most cases, but not in all, manufacturers are happy to exchange supplies.

1330. DICK, M. L., WINSHIP, H. W. and WOOD, G. C. **A cost effectiveness comparison of a pharmacist using three methods for identifying possible drug related problems.** *Drug Intelligence & Clinical Pharmacy*, Hamilton, Ill., 1975, May, vol. 9, no. 5, pp. 257-262.

A study was carried out to determine the cost effectiveness of a pharmacist in identifying possible drug-related problems (PDRPs) using three methods: chart reviews, rounds with physicians, and patient drug profiles. The clinical significance of the PDRPs was also determined. The type of drug-related problems being sought and the parameters to determine clinical significance of the PDRPs detected were defined. The patient drug profile system was the most productive and the least expensive for screening for PDRPs. However, only 14 per cent of those detected by this method were clinically significant PDRPs. Over half of the PDRPs identified while rounding with physicians were clinically significant. This method had many advantages the patient drug profile system lacked. The chart review method produced the median of productivity, cost and significance.

1331. KOENIGSBERGER, A. **Automated typewriters help us to prepare and update medication profiles.** *Pharmacy Times*, Port Washington, 1975, April, vol. 41, no. 4, pp. 64-66, 68.

The new unit dose system at the 430-bed Resurrection Hospital, Chicago, uses magnetic card typewriters to prepare patient medication profiles. The profiles are printed out in duplicate—for pharmacist and nurse—and the machines' storage and revision capabilities ensure an accurate and comprehensive patient history. Each profile is retained on a magnetic card and each card can store 5,000 typed characters. Alterations are easily made to the profiles by means of stickers which obviate the need to print out a complete new profile. The medication profile forms part of the patient's chart but the magnetic card is kept in the pharmacy. The system can also be used for making out the patient's bill on his discharge. About 40 per cent of the unit dose medications are packed and labelled in the hospital and the automated typewriters are used to prepare the labels. They can also be used for other typing work. The new system improves patient care by helping to eliminate the errors which may occur when data are copied by hand. It also simplifies paperwork.

1332. GIBSON, J. T., ALEXANDER, V. L. and NEWTON, D. S. **Influence on medication therapy of increased patient services by pharmacists in a pediatric hospital.** *American Journal of Hospital Pharmacy*, Washington, 1975, May, vol. 32, no. 5, pp. 495-500.

In a 175-bed children's hospital, increased pharmacist involvement in therapeutics was provided primarily by staff pharmacists within a satellite pharmacy. The records

of 200 patients were reviewed to determine if the drug treatment received agreed with the indications, contraindications, ages and dosages recommended by the official labelling. Half the patients received treatment before decentralized pharmacy services and half after. For all four drug use variables, a one-way analysis of variance revealed no significant differences between the two groups of patients.

1333. BLAKE, J. M. and WHITTINGHAM, A. R. **Four station solid dose dispensing unit.** *Journal of Hospital Pharmacy*, London, 1975, June, vol. 33, no. 3, pp. 63-64.

To avoid congestion round the tablet storage and dispensing unit in the pharmacy at Brighton General Hospital, Sussex, a free-standing unit, four feet by 12 feet, has been adapted to form a four-station dispensing unit. Above the work surface there are six shelves, accessible from both sides of the unit which take 168 boxes, labelled on each side with the generic names of the drugs they contain. Each of the four corners of the unit has a desk top containing labels and a supply of bottles is topped up daily. On each side of the unit are a multiplying balance and tablet-counting triangles. Ninety per cent of all solid dose formulations are dispensed from the unit.

1334. BAJAJ, P. S. and MCDERMOTT, D. **Investigating unit dose feasibility.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, May, vol. 17, no. 5, pp. 40-44.

Before a unit dose distribution system was seriously considered for Ottawa General Hospital a conceptual framework was presented to the supply systems committee responsible for investigating it. This provides useful guidelines which could apply to other hospitals. Variables and statistics were used to compare the existing system with a unit dose system in order to develop a cost-benefit analysis and to project resource requirements for each stage of a phased implementation of unit dose. Measurements were made of variables relatively independent of the drug distribution system and unlikely to change if a new system were introduced, and of those influenced by the drug logistics. An interaction matrix in which the variables have been set up is shown in the text. The methodology is described under two headings: Group A—which covers studies on drug loss monitoring, the number of doses consumed per patient day and the dosage form distribution, the doctor's order time distribution and order pattern, and direct packaging costs; and Group B—which covers studies on drug errors, nursing work, inventory and space, and drug cost.

1335. CORBETT, P. D. **Simplified records for a unit-dose system.** *Hospitals*, Chicago, 1975, May 16, vol. 49, no. 10, pp. 93-94.

When Framington (Mass.) Union Hospital introduced a unit dose drug distribution system it felt the need for a simplified recording method to replace the complex system of medication cards and nurses' notes. The form finally decided on is four-part (a white original and three green copies) and is pressure-sensitive. It gives much more information than a medication card and is easier to handle and read. On each of the first three days one up-to-date copy is removed from the nurses' file to the patient's file: on the fourth day a new record form is prepared and the white copy of the previous one (now complete for the four-day period) goes on the patient's file: the three green copies are discarded. In this way nurses and doctors always have complete drug information and nurses are relieved of unnecessary work. The system has been in

use for over a year and is accepted by all the staff concerned. Although designed for use in a unit dose system it could be used with any other drug distribution method. An example of the form is reproduced.

1336. GESTEL, A. L. G. M. van and HOELEN, A. J. Samenwerking automatisering in de geneesmiddelenvoorziening. **[Co-operative automation in drug provision.]** *Ziekenhuis*, Utrecht, 1975, May 21, vol. 5, no. 10, pp. 246-249.

In 1972 two hospitals in Tilburg and one in Nijmegen co-operated in setting up a computer-controlled unit dose drug system. It comprised the following functions: recording and control of doctors' orders; indicating incompatibilities; indicating prescriptions for expensive drugs; recording and controlling administration; maintenance of ward stocks; automatic supply of drugs most commonly used on wards; invoicing for drugs used; and statistical, medical and financial reports. The most important advantages of the system include: more effective control of drug administration; prevention of over-medication; improved management of pharmacy and ward stores; better records; and fewer medication errors. Unit dose packaging and computer processing meant increased costs although for the two Tilburg hospitals this increase amounted to only 0.5 per cent of total turnover in 1972; the advantages of the new system greatly outweighed the increase in costs.

LABORATORIES

See also Abstract Nos. 1308, 1321

1337. BROWN, A. E. **Reducing the workload on the hospital laboratory.** *Health and Social Service Journal*, London, 1975, July 12, vol. 85, no. 4447, pp. 1472-1473.

If present trends in the provision of health care continue, in the foreseeable future a majority of the work entering the 'hospital' laboratory will be for patients who are not in hospital. This will pose new problems and demand new thinking from those who manage the laboratory services. It should then become a district health laboratory, carrying out a rather different function than its present one. While continuing to provide a service to hospitals, its main function will be a health testing service to the patient in the community situation and the provision of a public health laboratory service in the true sense. In the move towards prevention rather than cure, chemical as well as bacteriological monitoring of food, water and air should be included.

1338. BROWN, M. and others. **Shared laboratory services? What to consider.** *Hospitals*, Chicago, 1975, May 1, vol. 49, no. 9, pp. 48-51.

Conflicts of inadequate finance, manpower and equipment, unequal distribution of services and high cost technology lead hospitals to consider sharing certain services. This paper summarizes the factors for and against, the policy issues and the organizational considerations in sharing laboratory services by posing a series of questions. A strategy for implementation is also presented.

BLOOD TRANSFUSION DEPARTMENT

1339. KUHNS, W. J., ALLEN, F. H. and KELLNER, A. **Blood banking as a professional discipline in medicine.** *Transfusion*, Philadelphia, 1975, March/April, vol. 15, no. 2, pp. 152-158.

If blood banks are to provide optimal care for donors and patients more physicians

with special competence in this field are necessary. Suitable undergraduate and postgraduate training must be made possible. Continuing part-time education must be provided to enable blood bank specialists to keep abreast of new developments. Recognition of skills should be provided by tests and certificates. The management of blood resources may then be expected to improve in parallel with the increase in numbers and quality of professional staff.

1340. CHAMBERS, R. W. and others. **A computerized donor processing system for a regional blood collection center.** *Transfusion*, Philadelphia, 1975, March/April, vol. 15, no. 2, pp. 170-173.

The initial phase of a computerized on-line donor processing system has been developed and demonstrated at Washington Regional Donor Centre of the American National Red Cross. It was used for registering donor information and for early screening of donors. The demonstration took place with the computerized system running in parallel with the existing manual procedure. Since volunteers assist with most blood collection procedures it was necessary to demonstrate that the computer system could be operated by non-technical staff.

DIAGNOSTIC X-RAY DEPARTMENT

1341. WHEELER, P. S. and SIMBORG, D. W. **The Johns Hopkins radiology computer reporting system.** *Electromedica*, Erlangen, 1975, nos. 2/3, pp. 104-108.

A computer reporting system for X-rays has been developed and tested in the radiology department, Johns Hopkins Hospital, Baltimore. It has been in routine use since 1972 and has largely replaced dictation. The four 'reading stations', linked with the central computer, can each handle up to 40 cases per hour. The essential purpose is the immediate provision of diagnostic information and the system has improved efficiency in the following ways: radiologists report almost as quickly as they can speak; reports are displayed instantly for verification while films are still on view; immediate printout allows report dispersal plus direct refile of a copy in the film jacket; and storage and retrieval (for research, medical audit, teaching or replacement of lost medical records) is made possible. The system can be learned in a few weeks and has been widely accepted.

REHABILITATION

See also Abstract No. 1233

1342. COCHRANE, G. and GLANVILLE, H. **Rehabilitation today: demonstration centres.** *Update*, London, 1975, June 9, vol. 10, no. 12, pp. 1357, 1359, 1361-1362, 1364, 1367-1368, 1370-1372.

In March 1973 a scheme was announced for the development of medical rehabilitation services in England and Wales. This included the designation of certain hospitals in each region as 'demonstration centres'. These centres were to act as focal points for the development of rehabilitation services, to set standards, and to teach the principles and practice of rehabilitation. So far some 20 hospitals have been designated:

a list of 14 of them, with their special interests, is included in the paper. Two of the first to be nominated are the Derbyshire Royal Infirmary and Odstock Hospital, Salisbury. A detailed description is given of the work of each.

OCCUPATIONAL THERAPY DEPARTMENT

See Abstract Nos. 1372, 1373

DEPARTMENTS FOR SPECIAL THERAPY

1343. GOULDING, R. **Poisons control centers—an essay on information and prevention.** In: Essays in toxicology. Volume 6, edited by Wayland J. Hayes, pp. 79-100. New York & London, Academic Press, 1975, £9.00

Poisons control centres have emerged to meet the need for more information and for this advice to be summoned at a moment's notice. After some 20 years' experience, this paper examines their working and whether they are, after all, fulfilling a worthwhile role as effectively as they should be. It covers: the extent of the problem; poisons centres; medical education; declaration of composition; assessment of toxicity; warning labelling; liaison with industry; international liaison; the dialogue; siting and organization of poisons centres; and the future.

INTENSIVE CARE UNITS

See also Abstract No. 1319

1344. **Computer-assisted patient data system.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, May, vol. 17, no. 5, pp. 16-17, 19.

A computer-assisted multiparameter patient monitoring system called the General Electric Patient Data System (PDS) is being used in the special care unit at the 179-bed Orthopaedic and Arthritic Hospital, Toronto. An integral minicomputer allows medical staff to obtain many new categories of physiological information as well as expanded data from standard measurements. The special care unit has 10 beds arranged in a 'U' shape. The most critically ill patients occupy the base of the 'U' and the two central beds are equipped with the PDS. A unique feature is the ability to 'tailor' the level of monitoring to the needs of the individual patient. The computer is used primarily to store, format and regenerate patient trend information, medication history and similar data. Though the basic equipment is essentially an extension of conventional monitoring the integral computer allows information to be recalled. Another exclusive feature called the 'vector contour plot' enables medical staff to recognize quickly that one or more parameters have changed over the course of time. The system is based on a three-level structure consisting of the bedside elements, central station and computer. All levels are connected in parallel to a digital data base and communications are accomplished in digital codes. This provides a high degree of flexibility, expansibility and integration. The capacity of the system is only partially used by current hospital needs.

1345. GENTLES, W. **Sunnybrook's new acute stroke unit. (A biomedical engineering viewpoint.)** *Hospital Administration in Canada*, Don Mills, Ont., 1975, May, vol. 17, no. 5, pp. 28-30.

The author is head of biomedical engineering at Sunnybrook Medical Center, Toronto. He begins by describing the methods used to select an appropriate monitoring system for stroke patients. The one selected (made by Philips Medical Systems) consists of four bedside monitors each capable of monitoring electrocardiograph (ECG) and blood pressure, though normally only ECG is monitored. A fifth can monitor ECG, blood pressure and intracranial pressure simultaneously. The monitors use the latest technology with solid state electronic memories to display a continuous trace which can be 'frozen' by pressing a stop button. The central monitoring station consists of four modules. The main element is a large seven-channel stored trace monitor. Its screen displays five seconds of the ECG from each of the five beds. The sixth channel can display any pressure being monitored on the specially equipped fifth bed and the bottom channel is a 'freeze' channel which can display waveforms frozen from other channels. Another element is the heart rate display which sets up an alarm when a patient's heart goes outside the pre-set alarm limits. The graphic recorder is the bottom right hand module in the central station and the module just above it is the recorder control. The servicing of the equipment is done by the company but minor adjustments can be done by the biomedical engineering department. Four photographs of the equipment are given.

1346. VETTER, N. J. and JULIAN, D. G. **Comparison of arrhythmia computer and conventional monitoring in coronary-care unit.** *Lancet*, London, 1975, May 24, vol. i, pp. 1151-1154.

The early detection of potentially dangerous arrhythmias is a major function of the coronary care unit (CCU). This paper discusses the results and implications of a study carried out at the Royal Infirmary, Edinburgh, involving 64 CCU admissions, to determine the relative efficiency of an arrhythmia computer and an electrocardiograph and alarm, which is a conventional monitoring system. The computer system was designed to detect and record all episodes of arrhythmias, but nurses using the conventional monitoring system were not necessarily expected to note every occurrence in a patient known to be having many episodes of arrhythmia. Methods involved monitoring two patients simultaneously, using the computer in one case and the conventional system in the second. With conventional monitoring, treatment was frequently delayed or not given at all. In computer-monitored patients, immediate treatment was given wherever necessary. False alarms occurred with both systems, but a graded system of alarms was incorporated into the computer system so that false alarms did not trigger the 'arrest' alarm. Five tables and a graph illustrate results of the survey.

1347. O'ROURKE, M. F. and SMITH, R. L. **A practical system of computerized medical records for documentation and decision making in the coronary care ward.** *Medical Journal of Australia*, Sydney, 1975, March 8, vol. i, no. 10, pp. 301-304.

Various computerized systems have been devised for medical records in coronary care units (CCU), where patients tend to be a relatively homogeneous group whose condition and progress should be easily traced. However some systems are unduly

complicated by attempting to summarize all available data, whilst others tend to be oversimplified. The system described in this paper is designed to avoid both these extremes, with the following advantages: (i) provision of cumulative daily summary for current CCU patients; (ii) provision of discharge summary on day of discharge, for hospital record and referring doctor; (iii) continuing accurate collection of data, following early review of summary, and correction of errors; (iv) accurate file for statistical analysis and recall provided; and (v) enables staff to become accustomed to computerized methods. Diagrams show the form completed for each patient and the discharge summary. Information from the form is transferred to punched cards for computer input, and the discharge summary represents output from the computer.

1348. SRIKASIBHANDHA, S. **A ceiling module for a newborn intensive care unit.** *Biomedical Engineering*, London, 1975, June, vol. 10, no. 6, pp. 223-224.

In a traditional intensive care unit, handling of newborn babies in incubators is usually obstructed by a surrounding clutter of electrical cables and gas pipes. This paper describes an overhead module developed to overcome this problem. It provides electrical and gas supplies and storage facilities for monitoring equipment and apparatus. The unit is suspended from the ceiling by two columns which serve as conduits for the gas tubing system and electrical wiring separately. It allows for a maximum of flexibility and convenience for care. Two photographs of the unit are included.

SPECIAL HOSPITALS AND UNITS

1349. FOSTER, V. **Should small hospitals contract for specialty services?** *Hospitals*, Chicago, 1975, May 16, vol. 49, no. 10, pp. 69-71.

In the United States small urban hospitals, and latterly rural ones as well, have been able to avail themselves of specialist medical services by contract. These services are provided by specialty groups, usually based on a town, who carry out some tasks at their centre and others at the hospitals under contract which they visit on certain specified days. The various ways in which such contracts are carried out are described: reimbursement may be on a flat rate fee basis; patients may be invoiced direct; sometimes the specialty groups buy the hospital departments in which they participate; in some cases the contractor staffs, equips and maintains the service without using the hospital's own staff; and sometimes the specialty group buys the hospital's existing equipment and hires existing staff. Hospitals contemplating such contract services should consider carefully the best type of contract for their needs: contracted specialty services can improve patient care or they can lead to financial ruin.

OUT-PATIENT

See also Abstract Nos. 1234, 1327, 1362, 1363

1350. NORELL, J. S. **Consultant sessions in health centres and group practices.** *Community Health*, Bristol, 1975, May/June, vol. 6, no. 6, pp. 306-310.

The emergence of group practices and health centres is traced and the reasons for

the separation of hospital and community medicine in Britain are outlined. In some parts of the country hospital consultants hold regular sessions in health centres and a few group practices. In Scotland this development has been actively encouraged, but in England it tends to be much more on an ad hoc basis, with the initiative usually coming from general practitioners. The advantages and disadvantages of such schemes for the patient, the consultant and the general practitioner are discussed. The most important factor in the success of schemes has been the attitude of the general practitioners and consultants, but by any test of effectiveness the case for health centre consultant sessions must be regarded as not proven.

1351. GROSSMAN, J. H., STOECKLE, J. D. and DINEEN, J. J. **New organizations out of old ones: teaching group practices out of private practice and outpatient departments.** *Milbank Memorial Fund Quarterly/Health and Society*, New York, 1975, vol. 53, no. 1, pp. 65-73.

This paper describes an experiment to reorganize and integrate the out-patient department at Massachusetts General Hospital, Boston, and individual private practices. Steps in the experiment included: (i) the out-patient medical clinics (general medical clinic, medical specialty clinics and ambulatory screening clinic) were decentralized from both the hospital and departmental administration by establishing a board of managers with administrative, fiscal and professional responsibilities for their ambulatory medical patients and for teaching and research in this area; and (ii) at the same time a group practice, Internal Medicine Associates (IMA), was formed by 13 of the hospital's medical staff. IMA was to be responsible for the care of ambulatory medical patients who sought care through the hospital or through personal referral to the staff of IMA. The design, rationale and results of the new organization are discussed.

CASUALTY AND ACCIDENT

See also Abstract No. 1315

1352. VAYDA, E., GENT, M. and HENDERSHOT, A. **Emergency department use at two Hamilton hospitals.** *Canadian Medical Association Journal*, Ottawa, 1975, April 19, vol. 112, no. 8, pp. 961-965.

This report compares emergency department use at two hospitals in Hamilton, Ont., one mainly serves lower socioeconomic and industrial groups and the other predominantly suburban residents. Although the groups served are different, the patterns of use at both were found to be similar. Over one-third of visits at both are classified as non-urgent. The urban industrial hospital has higher proportions of visits that are non-urgent, by men and due to trauma. However, other parameters such as arrival time, use of ambulance, proportion admitted, percentage of emergencies, percentage of repeat visits, use of radiology and laboratory facilities and proportions of visits in different categories of presenting complaint were similar at the two hospitals. Similarities in use patterns may be due to universal health insurance, for 90 per cent of users have medical insurance and have family doctors.

1353. MESSEL, M. A. **Urban emergency medical service of the City of Leningrad; translated from the Russian language by the Geographic Health Studies Program of the John E. Fogarty International Center for Advanced Study in the Health Sciences.** (DHEW Publication No. (NIH) 75-671) Bethesda, Md., National Institutes of Health, 1975, xii, 287pp.

After outlining the early development of emergency medical services in Russia and elsewhere, the author discusses in detail the developmental stages of 'skoraya' (emergency medical care) in the USSR, with particular reference to the service in Leningrad. The volume covers: structure, staffing and organization of a municipal medical aid (EMA) station; EMA station equipment; operation of the central EMA station and substations; the work of an ambulance physician; experience of the specialized EMA brigade; diagnostic mistakes in the practice of emergency physicians; advanced training for emergency physicians; the relation and interaction of EMA stations to hospitals and polyclinics; the preventive role of emergency aid; and the role of ambulance aid as an evacuation point.

1354. CLIFF, K. S. **Road traffic accidents—their impact on hospital and community health resources.** *Community Health*, Bristol, 1975, May/June, vol. 6, no. 6, pp. 311-316.

During the course of a detailed study of new patients attending casualty departments in the Wessex region, seven per cent were found to be attending as a result of a road traffic accident (RTA). The study showed that 42 per cent of all RTA injuries were of a major nature, i.e. they required district general hospital facilities to diagnose and treat them. Of all the people involved in RTAs, 25 per cent required admission as in-patients for treatment; a further 22 per cent required continuing hospital care and 27 per cent were referred to their general practitioners for continuing care. Thus, approximately 75 per cent of all patients involved in RTAs required continuing medical care either through the hospital or general practitioner.

DAY HOSPITALS

See Abstract Nos. 1360, 1361

CHILDREN

See Abstract Nos. 1321, 1327, 1332, 1363, 1374

GERIATRICS AND LONG-STAY

See also Abstract Nos. 1233, 1235, 1279, 1313

1355. MADDEN, G. and SHEPHERD, F. S. **The needs of the elderly.** *Hospital and Health Services Review*, London, 1975, July, vol. 71, no. 7, pp. 226-229.

General practitioners in an area part suburban and part semi-rural were asked for their views on the needs of elderly people and on the uncatered for and undiscovered

areas of need. Completed questionnaires were received from 221 general practitioners. The first part of the paper is based on a statistical summary of the replies. A majority had difficulty in getting hospital beds for acutely ill elderly patients; further questions were concerned with the degree of difficulty. A majority also had patients whom they considered would be better in accommodation other than that occupied at present. Most favoured the use of assessment units and the production of a booklet on services available to the elderly. The questionnaire provided space for any observations the general practitioners wished to make and a digest of the views expressed forms the second part of the paper. It covers difficult cases, the very elderly, the available services, residential homes, care in the home, assessment units, communications and visiting.

1356. BREARLEY, C. P. and RICHARDSON, J. **Social work in a geriatric hospital.** *Social Work Today*, Birmingham, 1975, July 10, vol. 6, no. 8, pp. 229-232.

Social work in a long-stay geriatric hospital may seem to offer a very limited range of opportunities. In establishing a student social work training placement in a small, long-stay geriatric hospital, it has been possible to examine the opportunities for new developments in social work practice as well as to begin to assess the need for social work service, based on more traditional lines. This paper is an attempt to outline the objectives and some of the results of the work that took place. It examines some of the theoretical possibilities for the extension of practice in such a setting and their implications, discusses the effect of life in a long-stay hospital on elderly patients, and describes the student placement. Some conclusions are drawn and possible future directions suggested.

1357. HARDIE, M. W. **The place of social work in hospitals.** *Social Work Today*, Birmingham, 1975, May 29, vol. 6, no. 5, pp. 134-135.

This review of the literature on the work of social workers with elderly patients in hospital reveals that there appears to be more material available for countries such as Germany or the United States than for Britain, indicating that the importance of social work in hospital may have been neglected. Certain studies show that although social workers are not the only 'health care professionals' to feel misunderstood by their hospital colleagues, their problem is accentuated by being the only professional group providing mainly social aid rather than medical treatment. An examination of studies on geriatric health care, made because of a lack of material actually written by social workers, revealed that few studies attempted a clear description of the medical social worker's involvement with geriatric hospital patients. They usually described the social worker's role in attempting to alleviate social problems concerning the patient and his relatives which could hinder the provision of adequate medical care. More work is needed if issues particular to social work in geriatric hospitals are to be clearly defined. The necessity for a social work audit to join the medical and nursing audits in the system of total patient care must consequently be considered, both in geriatrics and in general hospital care.

1358. POWELL, C. **Caring for the relatives of the elderly.** *Social Work Today*, Birmingham, 1975, July 10, vol. 6, no. 8, pp. 226-229.

An increasing amount of time and effort is spent by social workers in dealing with the problems of the elderly. This paper concentrates on those problems faced by

relatives of elderly people when hospital admission is required. The social worker has two roles, interpretative and protective. How these are carried out is considered: (i) when the patient is admitted; (ii) during her stay in hospital; and (iii) on discharge from hospital. The care of relatives of patients in the community is discussed under two heads: (i) those relatives not providing care for the patient; and (ii) where hospitals and other services are not providing care for the relatives.

1359. HARDIE, M. W. **Geriatric patient care: opinions of a sample of nurses.** *Nursing Times*, London, 1975, June 26, vol. 71, no. 26, occasional papers, pp. 61-64.

As part of a wider study of women in nursing, interviewers from the Nursing Research Unit, University of Edinburgh, sought the views of 448 hospital nurses, 146 community nurses, 125 hospital nurse administrators and 22 top nurse administrators on the care of geriatric patients. The study revealed a strong interest in and concern for elderly patients, who were widely recognized as being at a disadvantage as a group. Suggestions for improvements in care were offered by all grades of nurses, who also made observations about the use of time which was available for patients within the nursing care setting. Nurses, in stating their opinions about the most important elements in care, firmly underlined the theme of patient-centred nursing care. Some avenues for further research are suggested.

1360. HUBER, F. Das geriatrische Tagesspital mit besonderer Berücksichtigung der Erfahrungen der Tagesklinik im Felix-Platter-Spital, Basel. **[The geriatric day hospital with special reference to the experience of the day clinic, Felix-Platter Hospital, Basel.]** *Veska*, Aarau, 1975, May, vol. 39, no. 5, pp. 214-219.

In the spring of 1968 the Felix-Platter Hospital, Basel, decided to experiment with a geriatric day hospital and places for 12 patients were provided in a geriatric ward. Later a special pavilion was provided and by 1972 there were 48 places. Over half of the patients lived alone and 58 per cent were referred by general practitioners. Of the 72 patients attending in October 1973 19 per cent came once a week, 17 per cent twice a week, 25 per cent three times, two per cent four times and 36 per cent five times. Ten per cent attended for rehabilitation, 51 per cent to maintain physical activity by medical treatment, 33 per cent for purely social reasons and six per cent for 'other indications'. Patients with cardiovascular, psychiatric and locomotor disorders are in the majority. Half of those ceasing to attend were admitted to geriatric hospitals but attendance at the day hospital had, on average, delayed their admission for a year. Transport is provided by a voluntary organization which is paid a mileage allowance. The cost per patient day is Swiss Fr.45; of this the average patient pays about Fr.9 himself, Fr.16 is paid by health insurance and the remainder by the local authority.

1361. MARTIN, A. and MILLARD, P. H. **The New Patient Index—a method of measuring the activity of day hospitals.** *Age and Ageing*, London, 1975, May, vol. 4, no. 2, pp. 119-122.

The work load of three geriatric day hospitals was studied during 1973 and a simple mathematical calculation, the New Patient Index (NPI), devised to enable rapid assessment of function and activity to be made.

$$\text{The NPI} = \frac{\text{Number of new patients referred} \times 10}{\text{Size of the unit} \times \text{number of days worked}}.$$

This calculation gives a more accurate assessment of function than the conventional returns of total attendance or of new patient attendance for it takes size and activity into account. It can be measured over any period of time, weekly, monthly or yearly. It is proposed that a calculated NPI should be included in all future reports on day hospitals. The calculation should also be used in reverse to plan day hospital development based on the discerned needs of the elderly in an area or district.

NEUROLOGY AND NEUROSURGERY

See Abstract Nos. 1303, 1345

CARDIOLOGY

See Abstract Nos. 1346, 1347

ORTHOPAEDICS

See Abstract No. 1344

SURGERY

1362. LODER, R. E., OGG, T. W. and THOMPSON, P. W. **Day-case anaesthesia.** *Proceedings of the Royal Society of Medicine*, London, 1975, July, vol. 68, no. 7, pp. 413-416.

These three papers on anaesthesia for day surgery deal with: (i) the routine followed at Peterborough District Hospital, where considerable reliance is placed on the knowledge and organizing ability of the nursing staff; (ii) a study of the problems related to the recovery period; and (iii) experience with day-case anaesthesia at Cardiff Dental Hospital.

1363. ARMITAGE, E. N., HOWAT, J. M. and LONG, F. W. **A day-surgery programme for children incorporating anaesthetic outpatient clinic.** *Lancet*, London, 1975, July 5, vol. ii, pp. 21-23.

Many children suitable on clinical grounds for day surgery are still admitted the day before operation and discharged the following morning, because of the administrative difficulties associated with day surgery. To reduce these difficulties the Royal Alexandra Hospital for Sick Children, Brighton, established an out-patient anaesthetic assessment clinic and reserved an operating session exclusively for day surgery. Children are first seen by the consultant paediatric surgeon at a routine out-patient clinic, and those meeting the criteria are offered a place on the day surgery list. Those who accept are referred to the anaesthetic assessment clinic which is held on Monday afternoon each week and attend for surgery on Wednesday morning. The procedures followed are described and the first 100 patients are reviewed. The scheme resulted in better deployment of hospital resources and was welcomed by parents and general practitioners.

MATERNITY

See Abstract Nos. 1236, 1304, 1305, 1348

OPHTHALMOLOGY

See Abstract No. 1237

PSYCHIATRY

See also Abstract No. 1238

1364. MAPES, R. E. A. and CLARKE, M. J. **A path analytic model of psychiatric hospital performance.** *Social Science & Medicine*, Oxford, 1975, April/May, vol. 9, no. 4/5, pp. 257-262.

This paper presents the results of a statistical causal (path) analysis of annual returns from most psychiatric hospitals to the Department of Health and Social Security. These and other data have been analysed in such a way as to throw some light on the wide variations in performance which can be detected between individual psychiatric hospitals. The 47 variables used are listed in an appendix and can be broadly grouped as environmental, professional, institutional, or socio-medical. It is clear that one is not entitled to speak of 'success' or 'failure' since the available data on re-admission of in-patients and data on out-patients' performance is so limited. However, the study throws some light on the differing strategies which exist for dealing with all but severe psychiatric illness. The path analysis explores the relationship between these alternative strategies and indicates the association between expenditure on the hospital service, staffing levels and discharge rate in a precise manner.

1365. SCALES, E. J. and JOHNSON, M. S. **A psychiatric POMR for use by a multidisciplinary team.** *Hospital & Community Psychiatry*, Washington, 1975, June, vol. 26, no. 6, pp. 371-373.

A psychiatric problem-oriented medical record designed for use by multidisciplinary teams was introduced at Fairfield Hills Hospital, Newtown, Conn., in 1972. The need for revision of the hospital's medical record system arose from the development of the teams, which share more equally in responsibility for patient care, and from problems in meeting Medicare standards. The various forms that make up the record are described. Most of the forms are completed by the teams in regularly scheduled conferences.

1366. WILLER, B. and SANTORO, E. **The reporting habits of staff in a psychiatric hospital.** *Hospital & Community Psychiatry*, Washington, 1975, June, vol. 26, no. 6, pp. 362-365.

During a seven-day period at Lakeshore Psychiatric Hospital, Toronto, all progress records and reports made on a randomly selected sample of 90 patients were systematically coded for content and length. Thirty patients were selected from each of the three 90-bed units. On the units where nursing staff were primary case managers,

discussion was less likely to include mention of treatment goals or plans than where psychiatrists were case managers, or where nursing staff were case managers and patients were encouraged to attend case reviews. There was no difference between the units on recording habits, but nursing staff were consistently more dependable than psychiatrists at record-keeping.

1367. MELDMAN, M. J., JOHNSON, E. and MCLEOD, D. **A goal list and a treatment methods index in an automated record system.** *Hospital & Community Psychiatry*, Washington, 1975, June, vol. 26, no. 6, pp. 365-370.

In conjunction with the development of a computerized goal-oriented record system at Forest Hospital, Des Plaines, Ill., research staff developed a psychiatric goal list from goal statements most frequently used at the hospital. Treatment methods written by hospital staff were also reviewed and classified under the goal statement for which they were most frequently written. The result is the treatment methods index, which currently contains more than 500 goal statements and 1,500 method statements, and also lists all drugs and activity therapies used in the hospital. The index is stored in a computer, and a comprehensive treatment plan can be generated by entering the numbers of selected goals and treatment methods. The authors emphasize the advantages of the system in writing and updating treatment plans and its importance in peer review and other medical care evaluations.

1368. SHAMSIE, S. J. and TITUS, A. L. **Evaluation of a treatment centre by its clients.** *Hospital Administration in Canada*, Don Mills, Ont., 1975, June, vol. 17, no. 6, pp. 58-60.

A psychiatric hospital serves not only its patients, but also those agencies who refer patients to it. The relationship between the hospital and these agencies is an important one. Thistletown Regional Centre for Children and Adolescents, Toronto, carried out a survey of its major referral sources to ascertain; (i) knowledge of services offered, including recent changes; (ii) attitudes towards those services and changes in them; (iii) recommendations for improvements in services; and (iv) identification of any existing gaps. It appeared that most agencies had a general understanding of the services offered, but there was a lack of knowledge regarding recent changes. The largest numbers of concerns and recommendations concerned in-patient admission issues; there were relatively few about out-patient services. The survey emphasizes the need for feedback from the agencies served by a psychiatric hospital.

1369. GRUNEBAUM, H. and others. **Mentally ill mothers and their children.** Chicago & London, University of Chicago Press, 1975, xxii, 345pp. £7.75

This book is based on the experience at the Massachusetts Mental Health Center, Boston, of joint admission of psychotic mothers and their children. Joint admission is defined as any instance in which an infant or young child lived with and was cared for by his mother on a psychiatric ward for some period of time during her stay in hospital. The book is in five parts: (i) planning for joint admission; (ii) psychiatric nursing perspectives; (iii) children of mentally ill mothers; (iv) character, mental illness, and mothering; and (v) conclusions. Each part has an extensive list of references to the literature.

1370. BLOCK, W. E. **Applying utilization review procedures in a community mental health center.** *Hospital & Community Psychiatry*, Washington, 1975, June, vol. 26, no. 6, pp. 358-362.

Rockland County Community Mental Health Center, Pomona, N.Y., operates a utilization review programme based on a three-level system of chart review by medical records staff, a utilization review technician, and a committee of clinicians. Review is facilitated by a checklist for use in rating such issues as comprehensiveness, co-ordination, and quality of care against standards of care developed by the director of each service. The incompleteness of charts pulled for review is a continuing problem. The system makes for efficient review and has various secondary benefits, such as the improvement of medical records. A survey made in the first year showed that staff had mixed feelings about the need for review, but that 60 per cent thought it was helpful all or most of the time.

1371. EARLY, D. F. **Sheltered groups in open industry: a new approach to training and employment.** *Lancet*, London, 1975, June 21, vol. i, pp. 1370-1373.

The Industrial Therapy Organization (Bristol) Ltd (ITO) was established in 1960 specifically to provide for long-stay psychiatric hospital patients. In 1963 ITO introduced a scheme for the employment of sheltered groups in open industry. The initial scheme lasted until 1969 and the outcome for the 58 patients involved is presented in a table. A modified scheme was introduced with Department of Employment approval in 1970 and the details of the 36 patients who participated up to the end of 1974 are given in a table. A further table shows the numbers who did casual work with firms during 1967 to 1974. Experience suggests that this approach is the right one. It is most acceptable to the patient and has the advantage of giving the patient the best chance of becoming self-sufficient.

1372. SAFIER, D. and BARNUM, R. **Patient rehabilitation through hospital work under Fair Labor Standards.** *Hospital & Community Psychiatry*, Washington, 1975, May, vol. 26, no. 5, pp. 299-302.

In the United States the payment of psychiatric patients who work in the hospital or a sheltered environment in connection with rehabilitation or work therapy schemes must comply with the provisions of the Fair Labor Standards Act and a court ruling of 1973 thereon. The system of training for work and the employment of patients which has been in force at Binghampton (N.Y.) Psychiatric Centre since 1971 is described. In January 1975, of 36 patients who started training during 1973-4 nine had dropped out, four had transferred to other programmes, five were still in training and 18 had completed training as well as a period of sheltered employment (13 of them were in regular community employment). The paper includes an imaginary case history of a patient who trained for employment.

1373. TUCKER, C. H. **Occupational therapy and group homes.** *British Journal of Occupational Therapy*, London, 1975, May, vol. 38, no. 5, pp. 101-102.

Three group homes have been established in the area served by Clifton Hospital, near York. Four women were selected for the first home and moved to it with little preparation. With the provision of a second home by the local council, a preparatory

programme involving the Clifton Hospital Occupational Therapy Unit was established for as many subsequent home members as possible. The programme is carried out for six weeks prior to the discharge of patients and instruction is given in household tasks such as cookery in the occupational therapy domestic unit, which has basic kitchen equipment. Patients going to homes are also encouraged to shop in the community and use public transport before discharge. Assessments are made of all patients going to homes in such fields as housecraft, budgeting and personal hygiene. Patients, who have all been women so far, are taken to their home by the occupational therapy helper from the domestic unit; and the helper subsequently visits them weekly to smooth over any problems. The hospital has involved neighbours and other members of the local community in the scheme so that the discharged patients can be fully integrated into the local area.

1374. LATHAM, R. W. **A programme for disturbed adolescents.** *Nursing Times*, London, 1975, June 26, vol. 71, no. 26, pp. 1024-1027.

Meon House is a purpose-built unit for the treatment of acute disturbances of adolescence situated in the grounds of Knowle Hospital, Fareham, Hampshire. Opened on 6 October 1971, it serves the whole of the Wessex region and was intended to widen the scope of in-patient services for the 12 to 18 years age group. This paper describes the organization, staffing and programme of the unit. It is illustrated by a one-week timetable for residents and staff, an in-service training timetable and tables showing the shift system, staff changes October 1971 to June 1973 and the age ranges of the various grades of staff.

1375. CHEADLE, A. J. **Statistical ratings for psychiatric patients.** *Nursing Times*, London, 1975, July 24, vol. 71, no. 30, pp. 1182-1185.

This paper describes a rating scale to assess the progress of chronic psychiatric patients in a rehabilitation programme. The scale has been developed at St. Wulstan's Hospital, Malvern. The scale consists of 13 items: personal hygiene, care of clothing, care of self, co-operation in ward life, attitude towards medication, social mixing, conversation, leisure interests, money sense, mobility, attitude to discharge, and plans on discharge. Each section is rated on a three-point scale, 2, 1 or 0. Validity tests show that the mean scores of patients defined as major successes, minor successes, day patients and those returned to their parent hospitals are all different and in the right direction. An inter-rate reliability trial is described and discussed.

1376. HANN, J. Der Stand der Aussenfürsorge beim Bezirkskrankenhaus Erlangen. **[Extramural care based on Erlangen Psychiatric Hospital.]** *Das Öffentliche Gesundheitswesen*, Stuttgart, 1975, July, vol. 37, no. 7, pp. 371-378; summary in English p. 371.

Extramural care is defined as 'the regular care of patients previously treated (usually as in-patients) at psychiatric hospitals by doctors, social workers and nurses at places nearer to the patient than the hospital itself'. This paper traces the development of such care, based on the Erlangen Psychiatric Hospital, over the period 1934 to 1964. The population of the catchment area has averaged 700,000 and the number of beds at the hospital is 1,300: in the last year 14,500 patients were receiving extramural care

and the annual increase of such patients is 900. Over the 30-year period the proportion of schizophrenia patients requiring in-patient treatment has remained fairly constant at about one in five: for the others extramural care has sufficed. Patients with manic-depressive psychoses rarely need in-patient or extramural care, but are treated privately by specialists. The development of extramural care has prevented the overloading of psychiatric hospital beds.

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